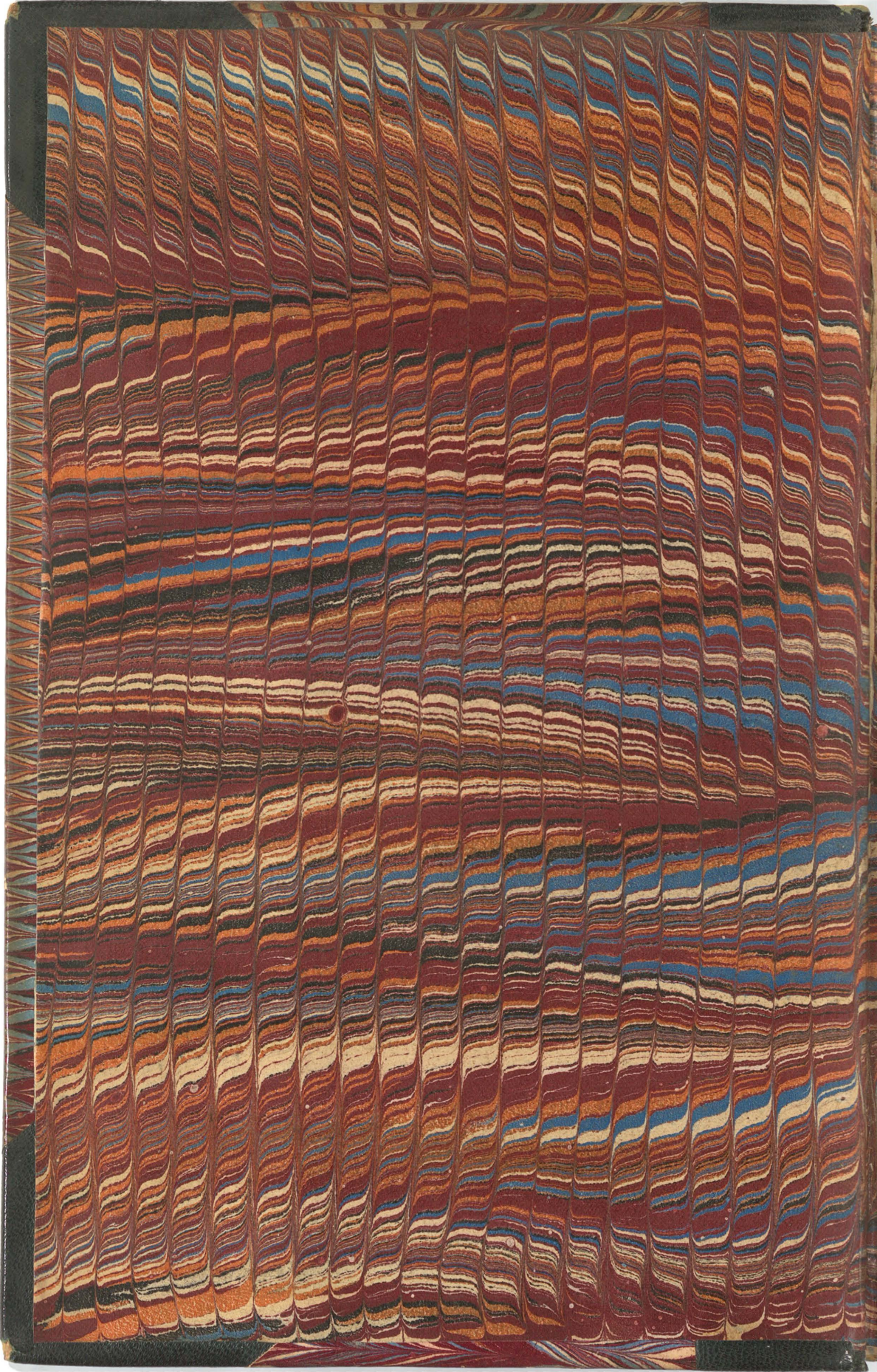

EXOTIC BOTANY:

CONSISTING OF

COLOURED FIGURES,

AND

SCIENTIFIC DESCRIPTIONS,

OF SUCH

NEW, BEAUTIFUL, OR RARE PLANTS

AS ARE WORTHY OF CULTIVATION IN THE

GARDENS OF BRITAIN;

WITH

REMARKS ON THEIR QUALITIES, HISTORY, AND REQUISITE MODES OF TREATMENT.

BY

JAMES EDWARD SMITH, M. D. F. R. S. &c. &c.

PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F. L. S.

HONORARY MEMBER OF THE PHYSICAL SOCIETY OF GÖTTINGEN.

Il y a dans la botanique un charme qu'on ne sent que dans le plein calme des passions, mais qui suffit seul alors pour rendre la vie heureuse et douce: mais si-tôt qu'on y mêle un motif d'*intérêt* ou de *vanité*.....tout ce doux charme s'évanouit. On ne voit plus dans les plantes que des instruments de nos passions; on ne trouve plus aucun vrai plaisir dans leur étude..... On ne s'occupe que de systêmes et de méthodes; matiere éternelle de dispute, qui ne fait pas connoître une plante de plus..... De là les *haines*, les *jalousies*, &c.——ROUSSEAU, *7me Promenade.*

VOL. II.

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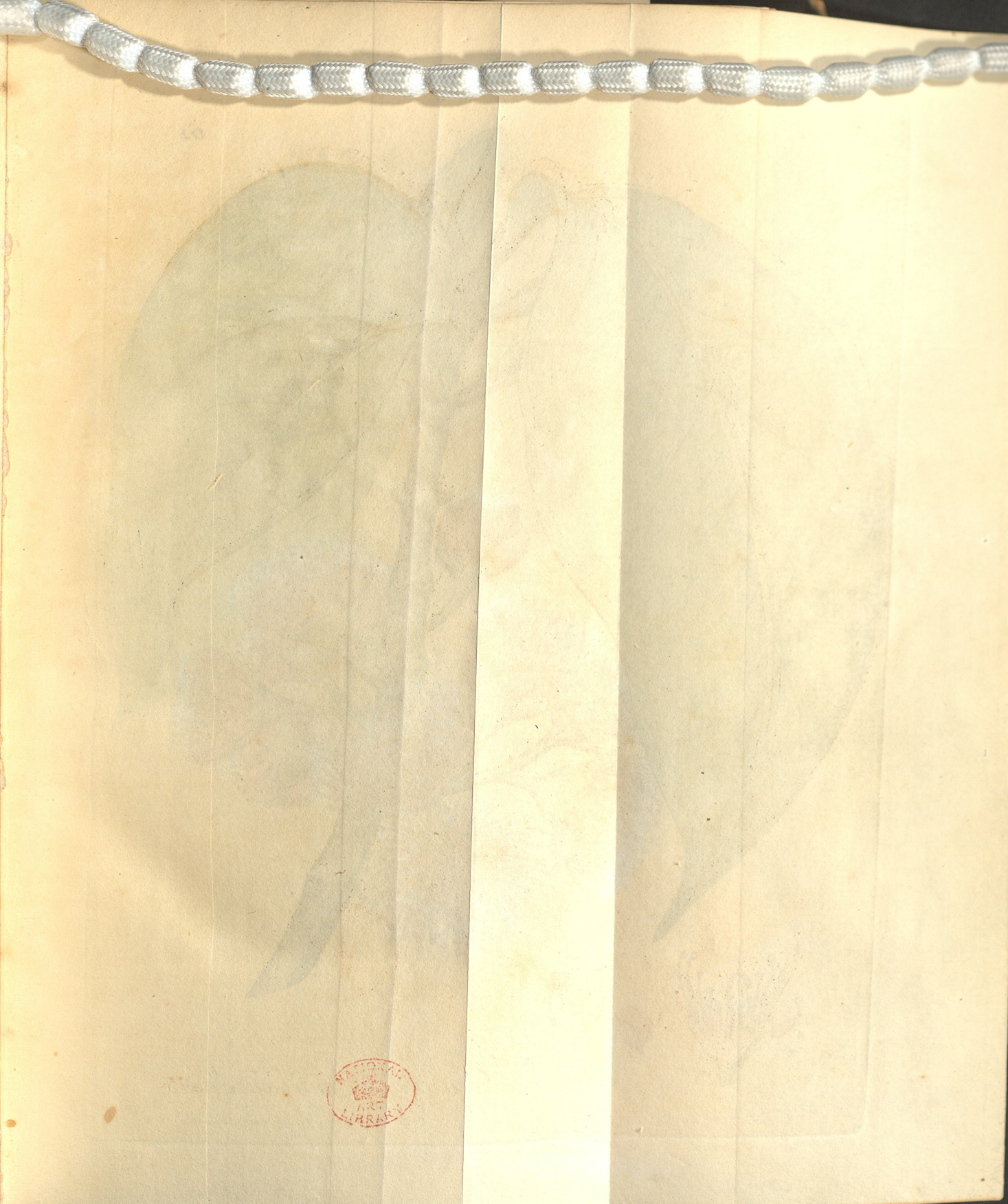


Eugenia malaccensis

Dec.r 1.1805. Published by Jas. Sowerby, London.

TAB. 61.

EUGENIA malaccensis.

Broad-leaved Eugenia.

ICOSANDRIA Monogynia.

Calyx 4-cleft, superior. *Petals* 4. *Berry* of 1 cell with a single seed.

Leaves elliptic-oblong, entire. Flowers lateral, about four on a stalk.

Eugenia malaccensis. *Linn. Sp. Pl.* 672. *Willden. Sp. Pl. v.* 2. 959. *Ait. H. Kew. v.* 2. 158. *Lamarck. Dict. v.* 3. 196.

Náti schámbu. *Rheede H. Malab. v.* 1. 29. *t.* 18.

Jambosa domestica. *Rumph. Amboin. v.* 1. 121. *t.* 37?

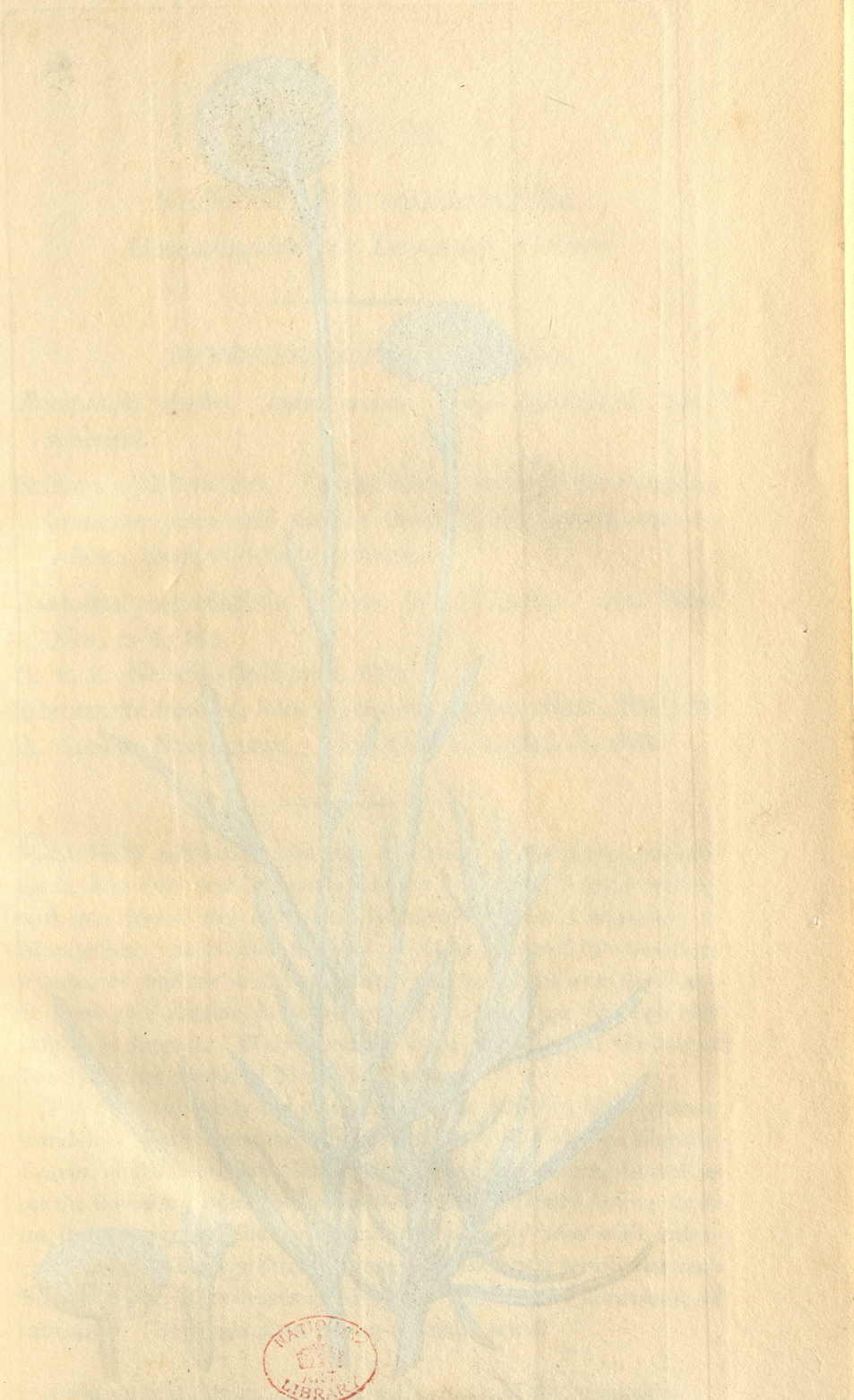
THIS rare and beautiful tree blossomed last July in the stove of George Hibbert, Esq. at Clapham, to whose favour we are indebted for a fine specimen.

In the warmest parts of the East Indies, its native country, this *Eugenia* is said to form a tall umbrageous tree, whose trunk is about 2 feet in diameter, with a reddish spongy bark. The leaves are opposite, dependent, on short thickish footstalks, of an oblong elliptic pointed form, entire, with one rib and many lateral veins, smooth on both sides, of a bright pleasant green, apparently deciduous. Flowerstalks from the sides of the branches, opposite or clustered, smooth, round, naked, each bearing from 1 to 4 or 5 inodorous flowers, which are remarkable for the elegant deep rose-colour of their petals, stamens and style. The calyx is green, the antheras yellow, incumbent. Stigma simple. Fruit, according to the *Hortus Malabaricus*, of the size and shape of a moderate pear, white with a blush of red, of a very agreeable vinous taste and smell, the pulp containing a large roundish seed, which appears to have the thin entire coat of the true *Eugeniæ*, differing from the hard

woody nut of those alternate-leaved species which constitute the genus named by Jussieu *Stravadium*. See Sonnerat's *Voyage à la Nouvelle Guinée*, 133, *t.* 92, 93, *Menichea rosata*.

It is difficult to determine all species or varieties of *Jambosa* mentioned by Rumphius, nor do the description and figure above quoted well accord with our plant, though taken for it by all writers, for Rumphius describes the stamens of the length and thickness of those of a White Lily.

a shows a section of the calyx, with the style and a few stamens. *b*, *b* petals. C magnified antheras.



Santolina rosmarinifolia

Dec.r 1. 1805. Published by Jas. Sowerby, London.

TAB. 62.

SANTOLINA rosmarinifolia.

Rosemary-leaved Lavender Cotton.

SYNGENESIA Polygamia-æqualis.

Receptacle chaffy. *Down* none. *Calyx* imbricated, hemispherical.

Stalks single-flowered. Leaves linear; those of the flowering branches plain and entire; those of the barren ones revolute, beset with scaly tubercles.

Santolina rosmarinifolia. *Linn. Sp. Pl.* 1180. *Ait. Hort. Kew. v.* 3. 165.

S. n. 2. *Gerard. Galloprov.* 193.

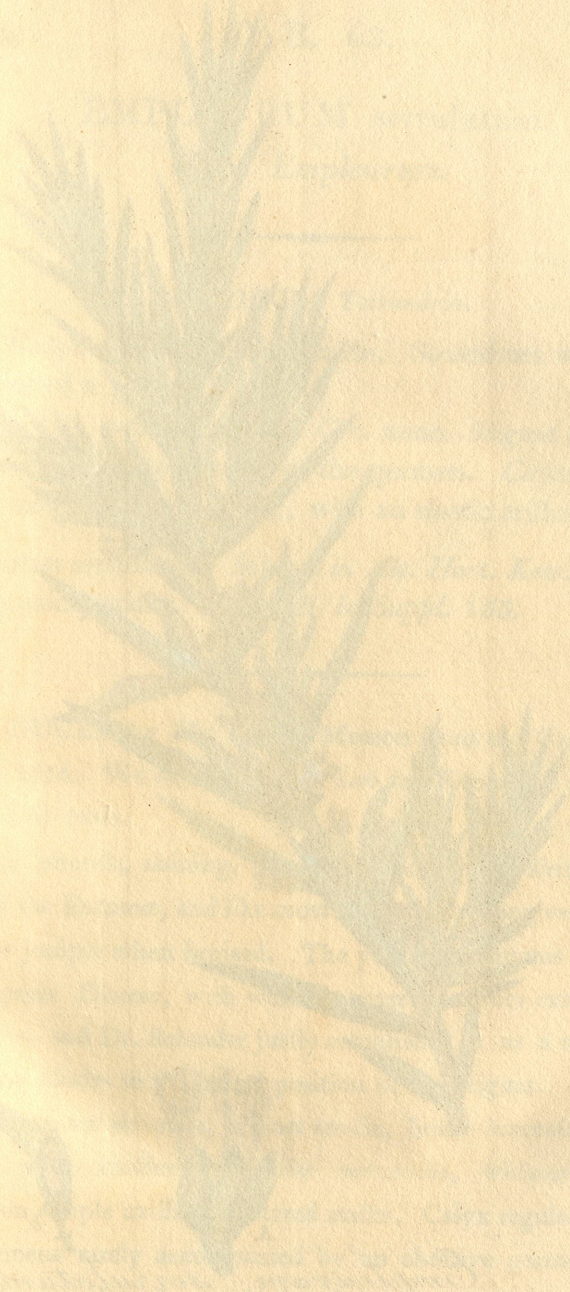
Abrotanum fœmina, foliis rorismarini, majus. *Bauh. Pin.* 137.

A. fœmina Narbonense. *Clus. Hist. v.* 1. 341. *ic.* 342.

CLUSIUS tells us he met with this plant on the sloping sides of some little hills near Narbonne, in the year 1552, when travelling with his friend the celebrated Rondeletius from Carcassone to Montpellier. It is said to grow in other parts of the South of France, as well as in Spain, chiefly on open hills near the coast. It bears our climate in the open border, flowering (though very rarely) in August. We received it from the Botanic Garden of Liverpool, by favour of Mr. John Shepherd.

The roots are woody and perennial. Stems shrubby, bearing many wand-like leafy branches, which are hoary and slightly angular. Leaves alternate, hoary, linear; those on the old stem, as well as on the flowering branches, plain and almost perfectly entire; those on the young branches revolute, and curiously beset with imbricated scales. A large discoid convex yellow flower terminates each branch. The calyx-leaves are fringed. Florets very numerous, all uniform. The whole plant has an aromatic scent.

a section of a flower. B floret with a scale of the receptacle.



Empleurum serrulatum

Dec.r 1. 1805. Published by Jas. Sowerby, London.

TAB. 63.

EMPLEURUM serrulatum.

Cape Empleurum.

MONOECIA Tetrandria.

Male, *Calyx* 4-cleft. *Corolla* none. Sometimes with the rudiment of a germen.

Female, *Cal.* 4-cleft, inferior. *Cor.* none. *Stigma* cylindrical, standing on a lateral tooth of the germen. *Capsule* beaked, of 2 valves. *Seed* solitary, with an elastic arillus.

Empleurum serrulatum. *Soland. in Ait. Hort. Kew. v. 3. 340.*
Diosma unicapsularis. *Linn. fil. in Suppl. 155.*

INTRODUCED by Mr. Francis Masson from the Cape of Good Hope in 1774. We delineated it in Lee and Kennedy's greenhouse early in July 1805.

It is a smooth, shining, evergreen, branching shrub, of the family of the *Rutaceæ*, and like most of them smelling very strongly of rue or juniper when bruised. The younger Linnæus referred it to the genus *Diosma*, with which it scarcely agrees except in natural order, and Dr. Solander justly established it as a new genus. The name alludes to the lateral position of the stigma.

The leaves are alternate, almost sessile, linear-lanceolate, acute, bordered with shallow glandular serratures, without stipulas. Flowers on simple axillary clustered stalks. Calyx regular, glandular. Stamens rarely accompanied by an abortive germen, equal, twice as long as the calyx, springing from the receptacle. Antheras large, of 2 cells, each opening by a lateral fissure. Germen mostly

in a separate flower without any traces of stamens, oblong, cylindrical, terminating in a flat leaf-like beak, at the base of which, at one edge, stands a pale, cylindrical, curved, smooth stigma. Capsule compressed, glandular, opening at the upper edge, consisting of 1 cell lined with a bivalve elastic arillus, and holding 1 large shining seed.

A calyx magnified and expanded, with the stamens and an imperfect germen.

b half-ripe fruit dissected, with its calyx, of the natural size.

Solanum Pyracantha

Decr. 1. 1805. Published by Jas. Sowerby, London.

TAB. 64.

SOLANUM Pyracantha.

Orange-thorned Nightshade.

PENTANDRIA Monogynia.

Corolla wheel-shaped. *Antheras* slightly connected, opening by 2 pores at the top. *Berry* superior, 2-celled.

Stem shrubby, very thorny, as well as the leaves and calyx. Leaves oblong, acute, pinnatifid, clothed with starry down. Thorns straight. Flower-stalks lateral.

Solanum pyracanthos. *Poiret in Lamarck. Encycl. v. 4. 299. Cavan. Leccion. 113.*

THIS brilliant *Solanum*, a native of Madagascar, never came under the notice of Linnæus. We find no mention of it except in the above publications. Its seeds were sent by the late Abbé Cavanilles to Mr. Lambert, to whom we are obliged for fine specimens. It was raised in the stove, where it flowered in August. Being turned out under a wall, it continued in great perfection during the autumn. To preserve it through the winter the heat of a stove is requisite.

The stem is shrubby, 3 or 4 feet high, alternately branched, round, leafy, clothed, like both sides of the leaves and the calyx, with a close, dense, starry pubescence, and, like those parts, beset with numerous, straight, sharp prickles, of a vivid orange colour, often purple at the base. The leaves are pinnatifid, and the older ones have orange ribs and veins. The flowers grow, not many together, on lateral branched stalks. Corolla purple, with greenish veins. Stamens equal. Berry globose, reddish.

a calyx. *b* corolla and stamens. *c* germen and style. D the starry pubescence magnified.


a

Cineraria gigantea

Dec.r 2. 1805. Published by Jas. Sowerby, London.

TAB. 65.

CINERARIA gigantea.

Gigantic Flea-wort.

SYNGENESIA Polygamia-superflua.

Receptacle naked. *Down* simple. *Calyx* cylindrical, simple, of many equal scales.

Flowers corymbose. Leaves ovate, acute, sharply toothed, cottony beneath; their stalks winged at the base: radical ones heartshaped.

OUR kind friend Thomas Evans, Esq. has favoured us with this plant from his garden at Stepney, where it flowered in July 1805. It was imported from Cape Horn in 1801, and does not appear to be described by any writer.

The stem is 2 or 3 feet in height, corymbose, leafy, round, furrowed, hollow, somewhat cottony. Radical leaves large, on long naked footstalks, heartshaped; those of the stem ovate, on stalks furnished with a toothed auricled appendage; the uppermost sessile and lanceolate: all sharply toothed, pointed, veiny; smooth above; paler and slightly cottony beneath. The flowers grow in a large terminal corymbus, and are conspicuous for their great size and elegant colours. The disk is a bright yellow; the radius of a pale yellowish white, streaked underneath with purple or crimson veins, which become more striking as the flowers grow older. A few cottony bracteas accompany the flower-stalks. The seeds are small, their down short, simple, very white.

a shows a dissection of the flower, with the receptacle.

Ventenatia major

Feb.y 1. 1806. Published by Jas. Sowerby, London.

TAB. 66.

VENTENATIA major.

Greater Ventenatia.

GYNANDRIA Tetrandria.

Calyx 2-leaved, superior; leaves cloven. Limb of the *corolla* 5-cleft, irregular; mouth fringed. *Stigma* linear, simple, between the *antheras*. *Capsule* inferior, of 1 cell, with many *seeds*.

Leaves channelled. Stalk glandular from the bottom. Calyx-leaves not half divided.

THIS genus belongs to a family consisting of *Lobelia, Goodenia, Scævola, Velleia, Jasione, Forstera, Phyllachne*, and perhaps several more, closely allied to the *Campanulaceæ* of Jussieu, but which properly form an order by themselves, as Mr. Konig has remarked; *Annals of Bot. v.* 1. 294. From that gentleman we expect a more complete illustration of it than we are now able to give. We learn from him that Mr. Baver has observed a striking instance of irritability in one of the species which flowered at Kew, the column of the stamens, when touched, throwing itself backward into a curved form with great quickness. We find the column in that posture in several drawings and dried specimens sent by Dr. White from Port Jackson, New South Wales, from which our only knowledge of the two species we are about to describe is derived.

The *Ventenatia* of Cavanilles being unquestionably a *Styphelia*, I am happy to dedicate so distinct and curious a New Holland genus to the honour of a botanist who has so much illustrated the plants of that country as M. Ventenat has done. His *Jardin de Cels, Choix de Plantes* and *Jardin de la Malmaison*, are among the most splendid and able works with which Botany has been enriched.

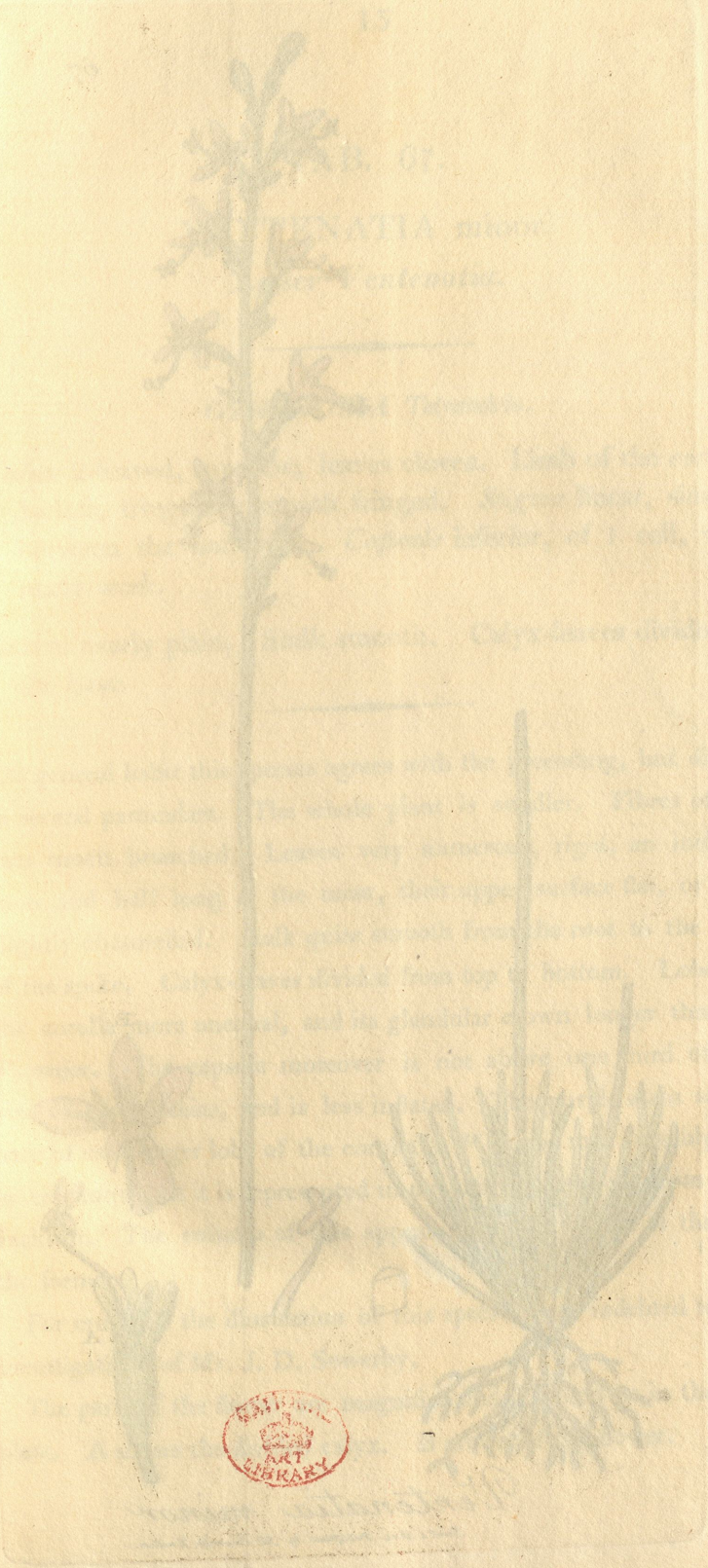
Ventenatia major appears to grow in a sandy soil. The leaves of some specimens have evidently been burnt down to the ground, as we have observed in the *Tetrathecæ*, but we have no proof that the

root is more than annual. The fibres are very long, simple, and smooth. Leaves all radical, numerous, ascending, 4 or 5 inches long, linear, acute, pungent, revolute, smooth on both sides, flatly keeled beneath, channelled above, minutely toothed at the margin. Flower-stalk solitary, 2 or 3 feet high, naked, round, unbranched, hollow, clothed from top to bottom, more or less densely, with horizontal, glandular, viscid hairs, such as more densely cover the spike, bracteas, germen, calyx, and outside of the corolla. Spike solitary, terminal, erect, simple, from 2 to 6 inches long, of many alternate, not quite sessile, upright flowers, each of them accompanied by 1 ovate pointed bractea, and 1 or 2 smaller, lanceolate, inner ones. Calyx superior, of 2 oblong, concave leaves, cloven at their summit, but not near half way down, permanent. Corolla rose-coloured; its tube cylindrical, scarcely exceeding the calyx; limb of 4 nearly equal, oblong, spreading segments, and 1 small, acute, reflexed lobe; the orifice, on the opposite side to that lobe, crowned with 6 cylindrical, erect, rose-coloured glands, about equal to it in length. Column of the fructification awlshaped, smooth, erect, except when irritated, about as long as the whole corolla, bearing at its summit 4 sessile, deflexed, elliptical, simple antheras, of 1 cell each. Style an oblong, smooth, terminal fissure, concealed from view by the antheras. Germen elliptical, inferior, often, as it should seem, abortive. Capsule elliptical, inflated, about a quarter of an inch long, crowned by the calyx, bursting lengthwise into 2 incomplete valves, and consisting of 1 cell, in which are many angular seeds, fixed to a globular central receptacle.

Professor Swartz's excellent observations on the *Phyllachne* and *Forstera*, (which surely, as he remarks, form but one genus,) see *Annals of Botany*, *v.* 1. 286—295, have helped us to fix the characters of our *Ventenatia*, which differs from that genus, *Forstera*, in its simple 2-leaved calyx, irregular and crowned corolla, 4 simple antheras, and simple stigma. Further differences may be found in the fruit and receptacle.

No plants can be more truly gynandrous than these, and they show that class to be founded in nature. Their approach to the *Orchideæ* however is but slight.

A germen. B calyx. C corolla. D its crown. E, E column. F, F antheras.



Ventenatia minor

Jan.y 1. 1806. Published by Jas. Sowerby, London.

TAB. 67.

VENTENATIA minor.

Lesser Ventenatia.

GYNANDRIA Tetrandria.

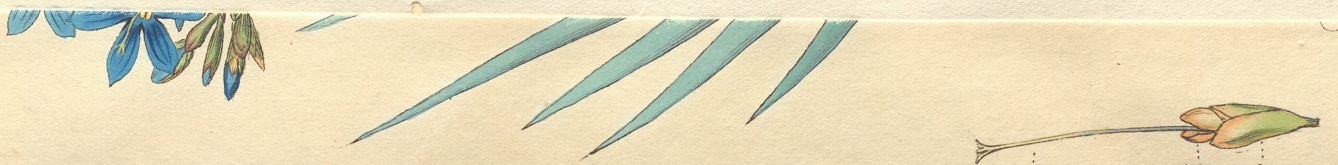
Calyx 2-leaved, superior; leaves cloven. Limb of the *corolla* 5-cleft, irregular; mouth fringed. *Stigma* linear, simple, between the *antheras*. *Capsule* inferior, of 1 cell, with many *seeds*.

Leaves nearly plain. Stalk smooth. Calyx-leaves divided to the base.

IN general habit this species agrees with the preceding, but differs in several particulars. The whole plant is smaller. Fibres of the root much branched. Leaves very numerous, rigid, an inch or inch and half long at the most, their upper surface flat, or very slightly channelled. Stalk quite smooth from the root to the base of the spike. Calyx-leaves divided from top to bottom. Lobes of the corolla more unequal, and its glandular crown longer than in *V. major*. The capsule moreover is not above one third of the size of that species, and is less inflated. The purple stain at the base of each larger lobe of the corolla in *V. minor* may possibly not be constant, but it is represented in our original drawing from Port Jackson. The column of this appears to be as irritable as that of the former.

For much of the illustration of this species I am indebted to the investigations of Mr. J. D. Sowerby.

The parts of the flower are magnified and disposed as in the last plate. A shows the divided calyx. B crown of the flower.


D
C
B

Witsenia corymbosa

Febr.y 1. 1808. Published by Jas. Sowerby, London.

TAB. 68.

WITSENIA corymbosa.

Corymbose Witsenia.

TRIANDRIA Monogynia.

Calyx none. *Corolla* with a cylindrical tube; limb in 6 regular, equal, deep segments. *Stigma* slightly 3-cleft. *Seeds* several, angular.

Corymbus many-flowered. Corolla smooth on the outside.

Witsenia corymbosa. *Gawl. in Curt. Mag. t. 895.*

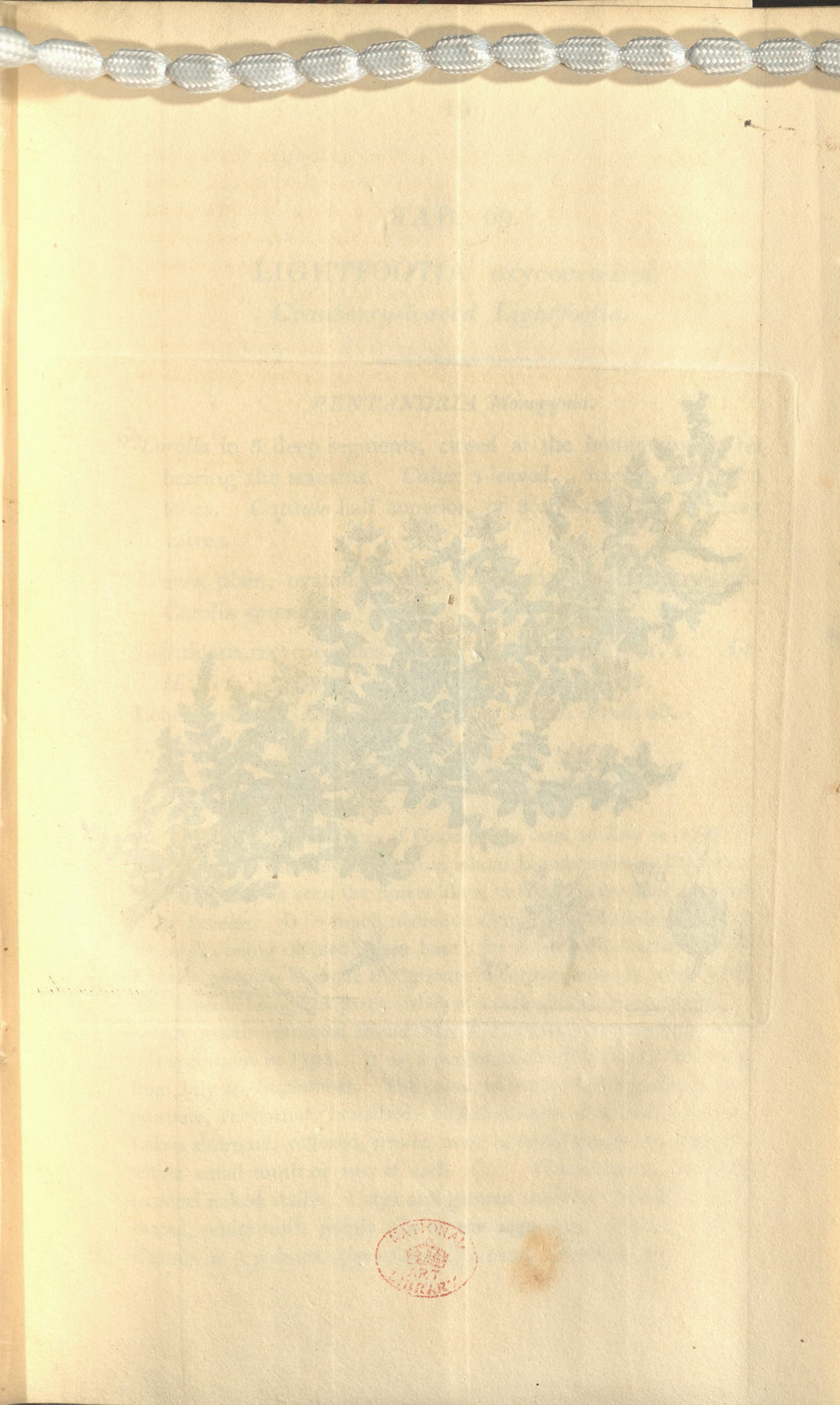
A NATIVE of the Cape of Good Hope, for which we are indebted to the liberality of George Hibbert, Esq., in whose greenhouse it flowered last September. The genus is altogether new to our gardens, nor has this species been mentioned by any author except Mr. Gawler. We own our obligations to this ingenious and elaborate writer for the above character of the seeds, which we have never seen.

The root is tuberous and perennial. Stem shrubby, erect, 4 inches or more in height, compressed, smooth; naked below; branched and leafy above. Leaves in 2 ranks, equitant, spreading, sword-shaped, acute, smooth, somewhat glaucous. Flower-stalk at first terminal, but soon lateral, solitary, erect, longer than the leaves, compressed, reddish, smooth, terminating in a large, spreading, compound, bracteated corymbus, whose branches are round. The lower bracteas are leafy; those at the subdivisions of the corymbus small, alternate, triangular, membranous, of a rusty brown; two under each flower larger, elliptical, leafy, clasping each other, and enclosing two more membranous smaller ones, which last would prevent our mistaking the former for a calyx, even though the analogy of the order were not against it. The corolla is

of a brilliant blue; its tube twice as long as the bracteas, cylindrical; limb spreading, regular, divided to the base into 6, nearly equal, obovate, smooth segments, each tipped with a little point. Stamens equal, short, in the orifice of the tube. Antheras heart-shaped, yellow. Germen superior, small. Style thread-shaped, as long as the whole corolla. Stigma small, 3-cleft. The flowers have no scent.

The genus was named by Thunberg in honour of Counsellor Witsen of Amsterdam, one of the promoters of his expedition to Japan.

a is the corolla opened to show the stamens. B outer, and C inner, bracteas which immediately accompany the flower, magnified. D style and stigma.



Feb.y 1. 1806. Published by Jas. Sowerby, London.

Lightfootia oxycoccoides

TAB. 69.

LIGHTFOOTIA oxycoccoides.

Cranberry-leaved Lightfootia.

PENTANDRIA Monogynia.

Corolla in 5 deep segments, closed at the bottom by valves bearing the stamens. *Calyx* 5-leaved. *Stigma* of 3 or 5 lobes. *Capsule* half superior, of 3 or 5 cells and as many valves.

Leaves plain, ovato-lanceolate, reflexed. Stigma three-cleft. Corolla spreading.

Lightfootia oxycoccoides. *L'Herit. Sert. Angl.* 4. *t.* 4. *Ait. H. Kew. v.* 1. 217. *Willden. Sp. Pl. v.* 1. 887.
Lobelia tenella. *Linn. Mant.* 120. *Thunb. Prod.* 40.
L. parviflora. *Berg. Cap.* 345.

A NATIVE of the Cape of Good Hope, sent to Kew in 1787 by Mr. Masson. It is not clear from whom Linnæus received his specimens. Had he seen the flower alive, he could never have referred it to *Lobelia*. It is much nearer to *Campanula*, differing only in its corolla being divided to the base; for it has been described as of 5 petals, possibly to make the generic character more plausible only. The capsule being but partly inferior is perhaps a stronger mark.

Our much respected friend Mr. T. F. Forster favoured us with this specimen in 1795. It is a perennial shrubby plant, flowering from July to September. The stem is bushy and spreading, not prostrate, very much branched; branches leafy, often finely downy. Leaves alternate, reflexed, sessile, ovate or ovato-lanceolate, smooth, with a small tooth or two at each edge. Flowers small, on little terminal naked stalks. Calyx and germen smooth. Corolla wheel-shaped, white with purple ribs to the segments. Stigma 3-cleft. Capsule of 3 pointed valves forming a cone. Seeds many.

This genus was named by Mr. L'Heritier in honour of the well-known author of the *Flora Scotica*, who died in 1788, and whose herbarium, now in the possession of the Queen, has often been consulted by us. Few persons ever loved the science more: and his situation as chaplain to that great naturalist the Duchess dowager of Portland gave him ample opportunities of cultivating it.

Another species, *Lightfootia subulata*, is figured by L'Heritier, and we can with confidence add a third, which is *Campanula tenella* of Linnæus, most certainly distinct from that in our plate, with which L'Heritier confounds it.

a back of a flower. B front of the same a little enlarged. C stamen. D stigma. E ripening capsule and calyx.

Asclepias carnosa

Jan.y 1. 1805. Published by Jas. Sowerby, London.

TAB. 70.

ASCLEPIAS carnosa.

Thick-leaved Swallow-wort.

PENTANDRIA Digynia.

Corolla reflexed. *Nectaries* 5, ovate, concave, bearing a horn-like appendage.

Leaves revolute, ovate, fleshy, very smooth. Stem shrubby, climbing, round. Umbels lateral, drooping. Corolla downy on the upper side.

Asclepias carnosa. *Linn. Suppl.* 170. *Murray Syst. Veg. ed.* 14. 260. *Willden. Sp. Pl. v.* 1. 1264. *Sims in Curt. Mag. t.* 788.

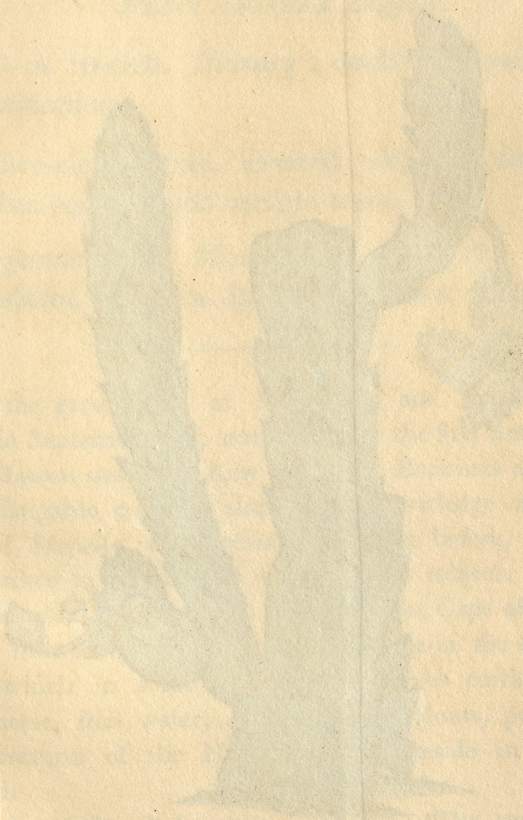
THE Hon. Mrs. Barrington, to whom we have on many occasions been obliged for some of the rarest and finest plants that the British gardens can boast, favoured us with this *Asclepias*, brought to her from the Straits of Sunda. We have not heard of it in any other collection. It is cultivated in the stove, and flowers from May to July, being very remarkable for its succulent habit, the elegance of its blossoms, and especially for their sweet and luscious fragrance, which has been compared to that of a rich plum cake. A combination of the smell of honey with the almond flavour of the Peruvian Heliotrope, perhaps gives the best idea of it.

This plant was only known by the mention made of it in the *Supplementum* of Linnæus, (from whence Murray and Willdenow having adopted it have mistaken its place in the genus,) till our much respected friend Dr. Sims published it in Curtis's Magazine. Having examined the flower in a living state, we see no reason to doubt its genus, nor are the nectaries materially different from those of other species, though their cavity is on the under side. We have several others with succulent leaves.

The original specimen in the herbarium of Linnæus was received from China, through his friend Blad, as the Gamboge plant; but there is another marked *India*, which he seems himself to have once mistaken for the *Cambogia Gutta*, though he has no where alluded to this specimen.

The stem of *Asclepias carnosa* is round (not square), juicy, slightly downy, climbing by twisting round any thing in its way. Leaves opposite, on thick, round, downy, dark-coloured stalks, ovate, bluntish, entire, slightly revolute, very succulent, smooth and shining on both sides, paler beneath, furnished with a thick rib, and several veins. Umbels lateral, axillary, solitary, drooping, on shortish stalks, simple, many-flowered, their rays brown or purple, not quite smooth, with many small bracteas at the base. Calyx 5-cleft, acute, hairy. Corolla wheel-shaped, its lobes acute, deflexed or vaulted, clothed on the upper side with dense pubescence, hitherto not mentioned by authors, which gives the flower a sort of frosted appearance. Nectaries smooth, shining, hollow underneath, their horns purple. Germens 2, purple, their styles running through the singular 5-sided body, on whose angles the antheras are fixed in pairs, as in several others of this natural order. This genus is perhaps strictly gynandrous; but as all the plants of the order have not been thoroughly investigated, and their structure is in many cases obscure, they remain for the present as Linnæus left them.

a is the back of a flower. B flower dissected and magnified. C, C, C nectaries. D germens. E fleshy angular body bearing the stamens. F stigmas.



Stapelia glanduliflora

Feb.ʸ 1. 1806. Published by Jas. Sowerby, London.

TAB. 71.

STAPELIA glanduliflora.

Glandular-flowered Stapelia.

PENTANDRIA Digynia.

Corolla 5- or 10-cleft. *Nectary* a double star over the organs of fructification.

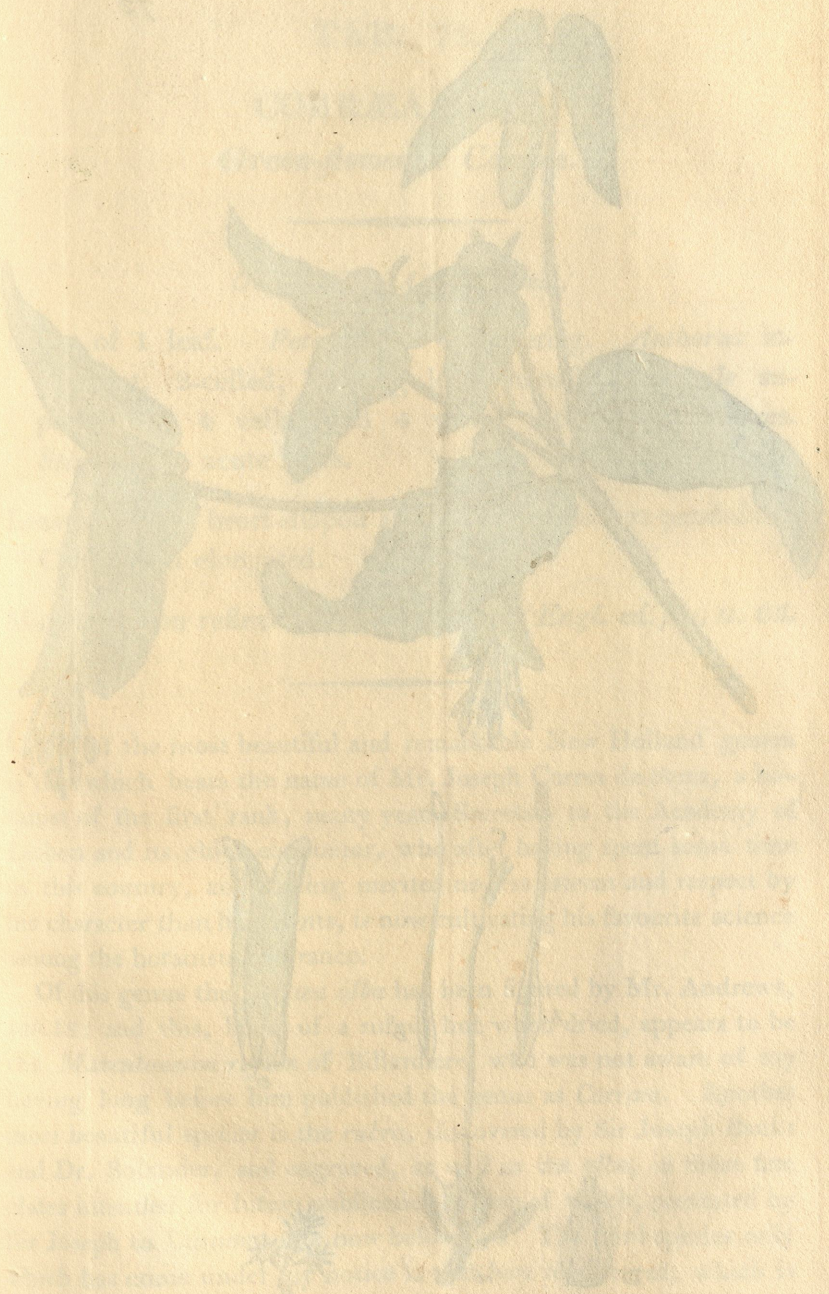
Corolla five-cleft, acute, covered with club-shaped glands. Branches square, with upright teeth.

Stapelia glanduliflora. *Masson Stap.* 16. *t.* 19.
S. glandulifera. *Willden. Sp. Pl. v.* 1. 1284. *Donn. Cant.* 43.

FROM the greenhouse of Mess. Lee and Kennedy, where it flowered in September last, not indeed for the first time in England, for Mr. Masson saw it at Kew in 1796. Botanists are indebted to this indefatigable collector alone for a knowledge of most of the species of *Stapelia*, 41 of which, unknown before, he has figured and described in a beautiful work on the subject. The genus is almost peculiar to the sandy deserts of the Cape of Good Hope. Many of the species are singularly offensive in the scent of their flowers, which in some instances resembles carrion, in others rotten cheese, foul water, and such-like odours, possibly to the great recreation of the Hottentots who reside in their neighbourhood.

The habit of the whole genus is peculiar. The stems very succulent, angular, often toothed, quite destitute of leaves. Flowers in many instances very handsome, and highly curious in their structure. The present species is known by its ascending square stems, whose angles are beset with upright teeth, and somewhat downy; its flower-stalks lateral, clustered, downy, longer than the corolla, which has five ovate acute tawny segments, and is clothed on the upper side with white glandular club-shaped hairs. The star covering the centre of the flower is orange and black.

Professor Willdenow has changed the specific name, apparently without intention, and we therefore restore it.



Correæa virens

Febr.ʸ 1. 1806. Published by Jas. Sowerby, London.

TAB. 72.

CORRÆA virens.

Green-flowered Corræa.

OCTANDRIA Monogynia.

Calyx of 1 leaf. *Petals* 2 to 4, cohering. *Antheras* incumbent, 2-celled, bursting longitudinally. *Capsule* superior, of 4 cells, and 4 valves with inflexed edges. *Stigma* in 4 acute lobes.

Leaves oblong, heart-shaped at the base. Flowers pendulous. Calyx-teeth elongated.

Mazeutoxeron reflexum. *Billard. Voy.* (*Engl. ed.*) *v.* 2. 65. *t.* 19?

ONE of the most beautiful and remarkable New Holland genera is that which bears the name of Mr. Joseph Correa de Serra, a botanist of the first rank, many years Secretary to the Academy of Lisbon and its chief conductor, who after having spent some time in this country, and having merited no less esteem and respect by his character than his talents, is now cultivating his favourite science among the botanists of France.

Of this genus the *Corræa alba* has been figured by Mr. Andrews, *tab.*18; and this, being of a rufous hue when dried, appears to be the *Mazeutoxeron rufum* of Billardiere, who was not aware of my having long before him published the genus as *Corræa*. Another most beautiful species is the *rubra*, discovered by Sir Joseph Banks and Dr. Solander, and engraved, as well as the *alba*, in those fine plates intended for future publication, some of which, presented by Sir Joseph to Linnæus, are now before me. The third species only which has come under my notice is that here represented, which is probably *Mazeutoxeron reflexum* of Billardiere; but as his representation of the calyx-teeth, the margin of the leaves, and the number of petals, ill accords with our plant, I think it best to give the latter a new name, alluding to the colour of the flowers as in the others.

For this very desirable acquisition we are obliged to the Marquis of Blandford, in whose fine garden it flowered in the open air in November last, having been raised from New Holland seeds. From Billardiere's remarks, the whole genus should seem to be rather hardy. The *rubra* is most eminently beautiful, and very nearly related to our *virens*, from which it differs chiefly in having upright red flowers, whose calyx is but very slightly toothed. Both species are rigid branched shrubs, whose pubescence is formed of stars, or rather prickly globules, clothing the branches and backs of the leaves, as well as the calyx and corolla. The leaves in both are opposite, on short stalks, heart-shaped at the base, more or less waved or toothed at the edge. Flowers terminal, solitary, each with a pair of narrow obtuse bracteas. In *C. virens* the flowers are pendulous. Calyx-teeth elongated, narrow and sharp. Corolla green, clothed with whitish pubescence, of only 2 petals in our specimens, but we cannot be certain of their number being complete, any more than that of the stamens, which are six, one of them seemingly double. The stigma is only 3-cleft; it is naturally 4-cleft, not simple and acute, as M. Billardiere as well as myself once thought it. I conceive this genus must belong to the natural order of *Rhododendra*, not to the *Rutaceæ*.

a flower-stalk, bracteas, open calyx, and pistil. *b*, *b* stamens. C magnified stigma. D magnified germen, clothed with hair and standing on a green receptacle. *e* petals. F magnified pubescence.

Digitalis Sceptrum

Pubd 1 1806. Published by Jas Sowerby, London.

TAB. 73.

DIGITALIS Sceptrum.

Madeira Shrubby Fox-glove.

DIDYNAMIA Angiospermia.

Calyx in 5 segments. *Corolla* bell-shaped, 4- or 5-cleft, inflated. *Capsule* ovate, of 2 cells, with many *seeds.*

Segments of the calyx linear. Bracteas linear-lanceolate, longer than the flowers. Corolla obtuse. Leaves elliptic-oblong, serrated. Stem shrubby.

Digitalis Sceptrum. *Linn. Suppl.* 282. *L'Herit. Sert. Angl.* 21. *t.* 24. *Ait. Hort. Kew. v.* 2. 346.

MR. MASSON was the discoverer of this handsome plant in the shady woods of Madeira, from whence he communicated it in a dry state to Linnæus, and in a living one to the Royal Gardens at Kew in 1777. It flowers in July and August, and requires the shelter of a greenhouse in winter. We received it from Mess. Lee and Kennedy.

The stem is shrubby, 5 or 6 feet high. Branches round, each bearing a large tuft of crowded, elliptic-oblong, acute leaves, smoothish above, veiny and downy beneath, serrated in their upper part, tapering and entire at the base. Flowerstalks terminal, solitary, naked, each bearing a large, dense, ovate spike of handsome yellow flowers reticulated with tawny veins. The bracteas are linear-lanceolate, downy, and project beyond the flowers. Calyx downy; its segments rather linear-lanceolate than awl-shaped.

a calyx and pistil. *b* bractea. *c* stamens.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Dolichos purpureus

Febr.y 1. 1806. Published by Jas. Sowerby, London.

TAB. 74.

DOLICHOS purpureus.

Purple Dolichos.

DIADELPHIA Decandria.

Stigma downy. *Standard* with 2 oblong parallel protuberances at the base, which compress the wings beneath them.

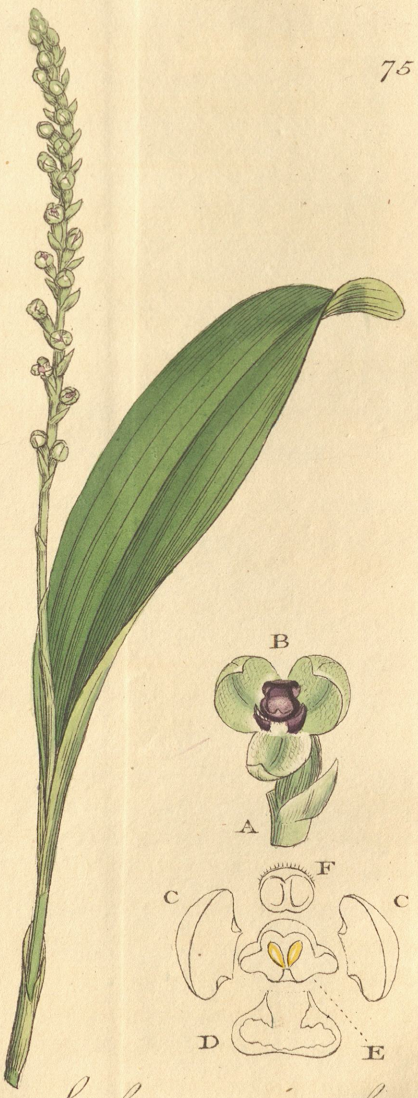
Stem climbing. Leafstalks hairy. Wings spreading. Pod muricated, compressed. Calyx enveloped in a pair of partial bracteas.

Dolichos purpureus. *Linn. Sp. Pl.* 1021. *Donn. Cant.* 135.

THIS is said to be a native of the East and West Indies, and is mentioned by Mr. Donn as having been introduced into our English gardens in 1790. It is not in the *Hortus Kewensis*, nor is it figured in any of our periodical works. There is no authentic specimen of this species in the Linnæan Herbarium, so that our only guide in determining it is what appears in the Species Plantarum. Our specimen grew in the hothouse of the Marquis of Blandford, which has been completely overrun by the plant in the course of 2 years, the root and stem being perennial, not annual, flowering through the summer.

Stem climbing, angular, roughish with deflexed hairs, sometimes smooth. Leaflets broad-ovate, approaching to heart-shaped, pointed, smooth or downy, reticulated with purple veins. Footstalks more or less downy. Flowers in very long, interrupted clusters, elegantly variegated with rose-colour and purple. Besides the solitary bracteas at the base of each flowerstalk, the calyx is enveloped in a pair of lobed ones, seated close to its base. Pods short, broad, and compressed, muricated all over with little tubercles, and of a shining purple hue.

a calyx and bracteas. *b, b* standard. *c, c* wings. *d* keel. *e* stamens. *f* pistil. *g* section of the pod.



Stelis micrantha

Febr.y 2. 1806. Published by Jas. Sowerby, London.

TAB. 75.

STELIS micrantha.

Small-flowered Stelis.

GYNANDRIA Diandria.

Nectary a concave lip without a spur. 3 *outer petals* united at the base: 2 *inner* resembling the lip, vaulted over the style. *Lid* vertical, deciduous. *Flowers* reversed.

Cluster dense and slender, longer than the leaf. Closed flowers six-sided.

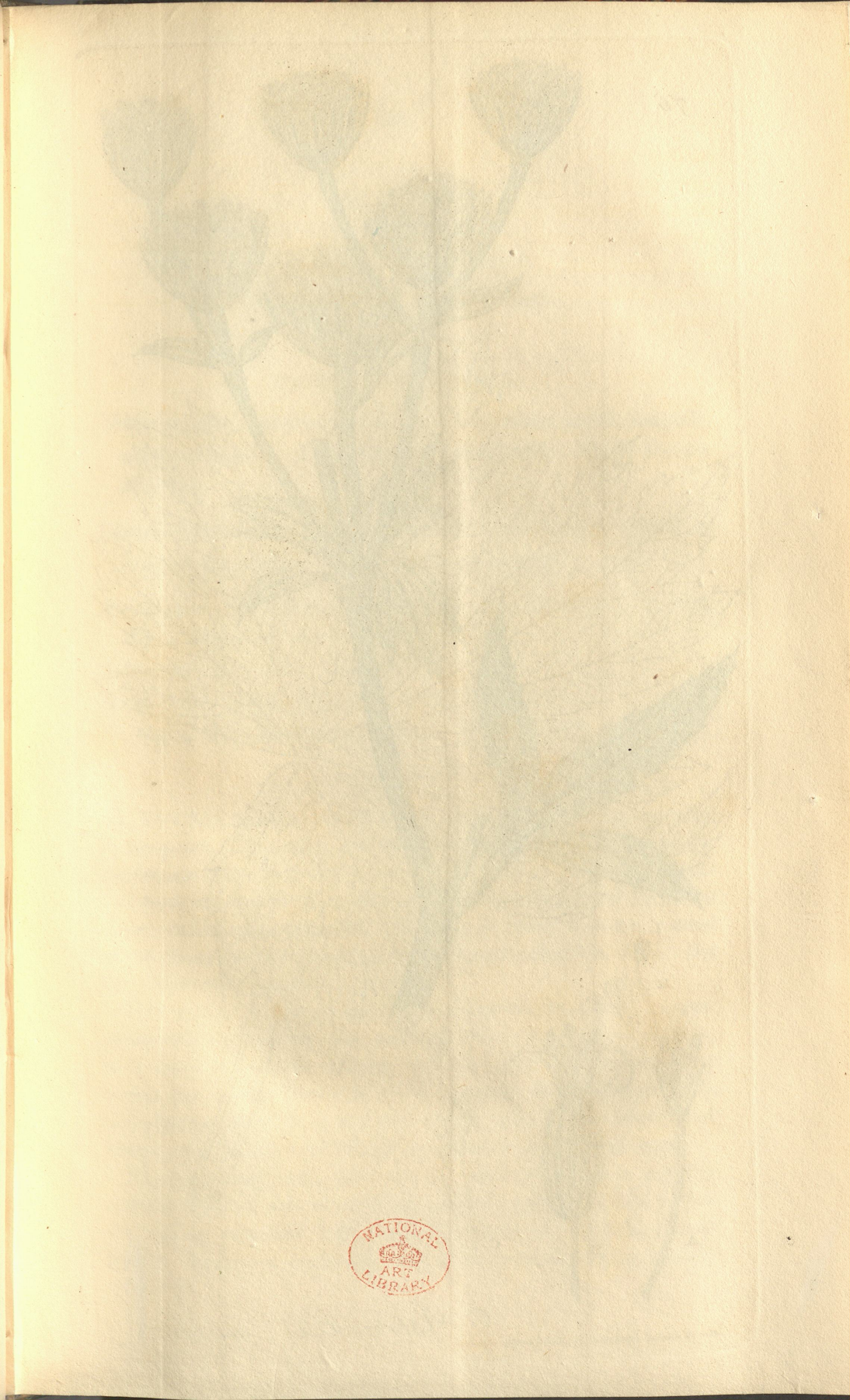
Stelis micrantha. *Swartz in Stockh. Trans. for* 1800. 248.
Dendrobium micranthum. *Ejusd. Act. Nov. Ups. v.* 6. 84.
Epidendrum micranthum. *Ejusd. Prod.* 125.

THE Marquis of Blandford has favoured us with this very curious and rare little orchideous plant, a native of Jamaica, which flowered in his Lordship's stove at White Knights in the latter part of last November. It accords exactly with a dried specimen sent by Dr. Swartz, its original discoverer, who after much consideration thought proper to constitute a new genus of this and the *Epidendrum ophioglossoides* of Jacquin and Linnæus. Their character indeed is peculiar, and justifies this determination.

The root is parasitical, fibrous, perennial. Stem short, simple, erect, sheathed at the base, bearing a solitary leaf, and from its bosom a long simple upright slender cluster, much longer than the leaf, of numerous crowded alternate little flowers, all leaning one way, and each accompanied by a small concave bractea. The leaf is thick, hard and succulent, elliptic-oblong, entire, recurved, obtuse, obscurely ribbed, borne on a thick channelled stalk. Flowers reversed in their position, their petals closed, forming a roundish six-sided figure. Three outer petals green, uniform, concave, keeled: two inner much smaller, dark-brown, obtuse, concave,

vaulted over the organs of fructification. Lip agreeing with the inner petals in colour, size, and nearly in form, being uppermost from the reversed position of the flower, without any spur. Style short, encompassed with the parts just described, and terminating in a three-lobed margin, one edge of which bears two masses of yellow pollen over the concave stigma, covered with a large, vertical, round, downy lid, paler than the lip.

A shows a magnified flower in its natural posture, with the bractea. B lip, or nectary. Annexed is an outline of the inner parts, turned and more magnified. C, C inner petals. D lip. E bordered style. F lid removed.



Astrantia major.

March 1. 1806. Published by Jas. Sowerby, London.

TAB. 76.

ASTRANTIA major.

Great Black Master-wort.

PENTANDRIA Digynia.

Umbel simple. *Involucrum* of many lanceolate, equal, smooth, coloured leaves. *Fruit* furrowed, muricated. Many *flowers* abortive.

Leaves five-lobed; lobes three-cleft. Involucrum about as long as the umbel. Calyx-teeth awlshaped.

Astrantia major. *Linn. Sp. Pl.* 339. *Ait. H. Kew. v.* 1. 328. *Ehrh. Phytoph.* 93.
Astrantia. *Riv. Pent. Irr. t.* 68.
A. n. 790. *Hall. Hist. v.* 1. 351.
A. nigra, sive Veratrum nigrum. *Ger. em.* 978.

A YOUNG botanist would not at first take this for an umbelliferous genus. The umbel, with its delicately-coloured leaves, has the appearance of a compound flower. The parts of fructification will well repay the trouble of an accurate examination, and will be found no less curious than beautiful. The elegant Haller was very partial to this plant, and has celebrated it in his poem called The Alps. See Mrs. Howorth's translation, p. 32.

This species is not uncommon in alpine meadows and pastures, particularly such as are moist and near water, flowering in August. It is easily cultivated, thriving well on a rich and rather moist border, but is not found in every flaunting flower-garden. We have observed it to be a favourite of the more refined admirers of Nature, who would most delight to gather it on its native Alps.

The root is perennial, tuberous, externally black, of a pungent aromatic flavour, and stimulating cathartic quality. Stem a foot and half or two feet high, upright, furrowed, smooth, almost leafless. Leaves of a shining deep green, smooth, veiny, mostly

radical and on long stalks, deeply divided into 5 broad lobes, of which the 3 middle ones are most regularly 3-cleft; all are sharply and irregularly serrated, the serratures fringed with minute bristles. Umbels on somewhat corymbose or panicled stalks, accompanied by variously-lobed, partly coloured, and prettily veined, bracteas, which approach to the habit of the involucrum; but, nevertheless, analogy forbids us to consider (with Linnæus) the inflorescence as a compound umbel. Each umbel is erect, when young rather drooping, formed of very numerous, capillary, simple, equal, purplish, smooth stalks. Involucrum of many spreading, entire, acute leaves, of a lanceolate form inclining to obovate, smooth, white with a purple tinge, veined and tipped with green. Central flowers perfect; those of the circumference abortive, having no germen. Calyx-teeth narrow and sharp. Petals long, narrow, inflexed, uniform, whitish. Antheras pale purple, apparently perfect in all the flowers. Styles recurved, with bluntish stigmas. Germen and fruit obovate, but slightly compressed, marked with many deep longitudinal furrows; the intermediate ribs tubular, beset with numerous ascending sharp teeth or tubercles, by which the genus is well characterized.

Garidel, *tab.* 46, has given a faulty figure of this plant, much more faultily applying to it all the synonyms of *Trollius europæus*.

A abortive flower magnified. B germen and other parts of a fertile flower. C rib of the fruit. D petal. E stamen.

Astrantia minor.

March 1. 1806. Published by Jas. Sowerby, London.

TAB. 77.

ASTRANTIA minor.

Small Black Master-wort.

PENTANDRIA Digynia.

Umbel simple. *Involucrum* of many lanceolate, equal, smooth, coloured leaves. *Fruit* furrowed, muricated. Many *flowers* abortive.

Leaves divided to the base, deeply serrated, acute. Involucrum rather longer than the umbel. Calyx-teeth ovate.

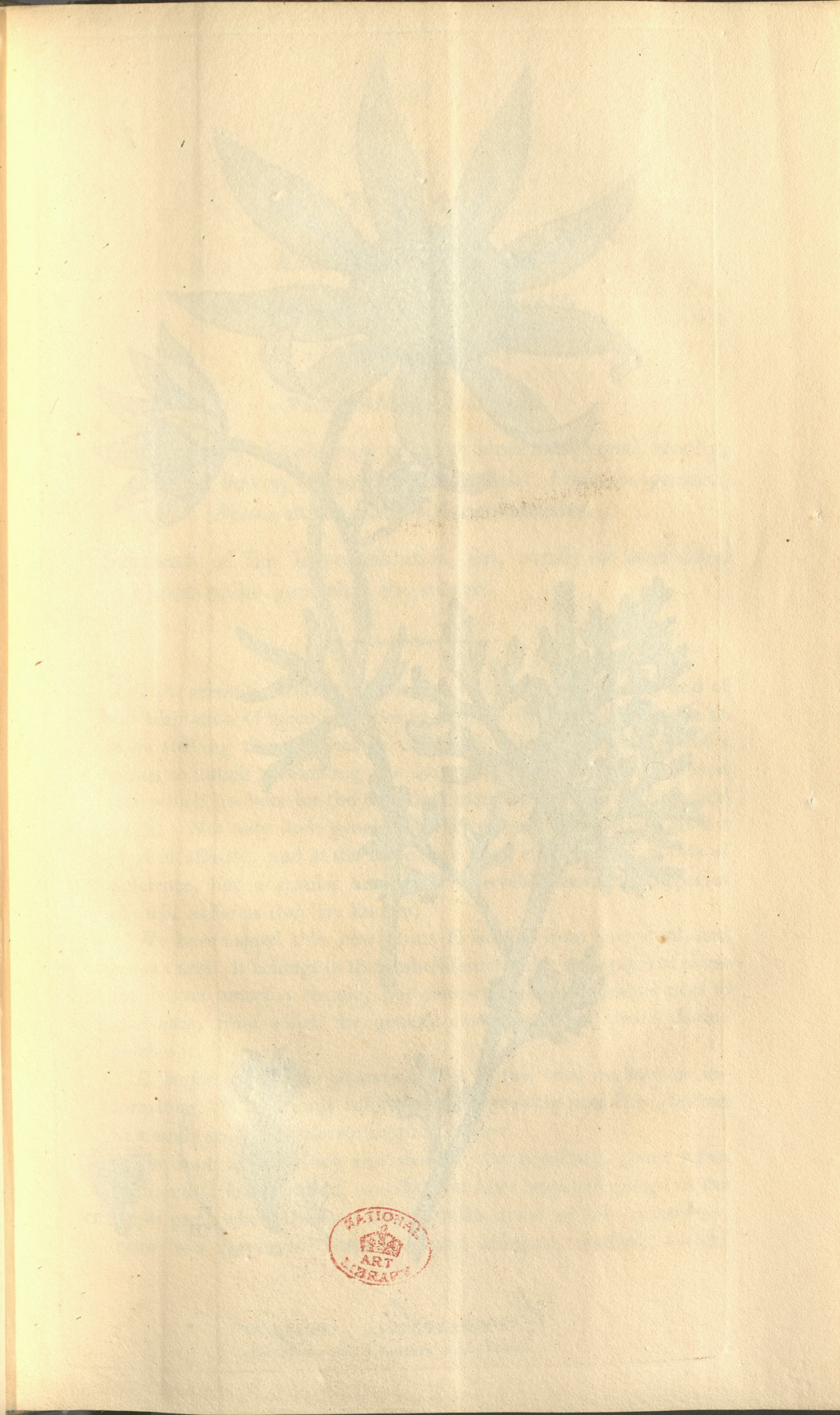
Astrantia minor. *Linn. Sp. Pl.* 340. *Ait. H. Kew. v.* 1. 328. A. n. 791. *Hall. Hist. v.* 1. 351.

Helleborus minimus alpinus, astrantiæ flore. *Bocc. Sic.* 10. *t.* 5. *f.* 3.

THIS at first sight differs from *A. major* principally in size, but is essentially different in several other respects. It is much more rare, not only in our gardens, but even on the Alps, being chiefly found in the most elevated situations in the neighbourhood of the glaciers, growing in moist black earth under the shade of abrupt precipices or of surrounding shrubs, and flowering in August and September.

Root perennial. Whole plant smooth, delicate and slender. Stem 12 or 15 inches high. Leaves divided to the very base into (for the most part) seven sharp, deeply cut and serrated lobes, with bristly teeth. Umbels of an ivory white, tinged slightly with purple, and sometimes a greenish hue. Calyx-teeth and petals broad. Fruit rather elliptical, with strongly crested ribs.

A leaf of the involucrum. B abortive flower. C fertile flower. D petal. e, E ripening fruit.



Eriocalia major

March 1. 1806 Published by Jas Sowerby, London.

TAB. 78.

ERIOCALIA major.

Great Woolly Master-wort.

PENTANDRIA Digynia.

Umbel simple. *Involucrum* of many lanceolate, equal, woolly, coloured leaves, longer than the umbel. *Fruit* compressed, hairy. *Petals* none. Many *flowers* abortive.

Segments of the leaves bluntish, flat, woolly on both sides. Flower-stalks somewhat corymbose.

To the scientific student of the natural affinities of plants, and of the adaptation of peculiar tribes to certain regions, nothing can be more striking than to find in the sandy wilds of New Holland a genus so much resembling the *Astrantia* of the European Alps as that which is here for the first time made known to the botanical world. Not only their generic characters, and their habits, have a marked affinity, and at the same time many characteristic points of difference, but a similar analogy is observable between the species of each, as far as they are known.

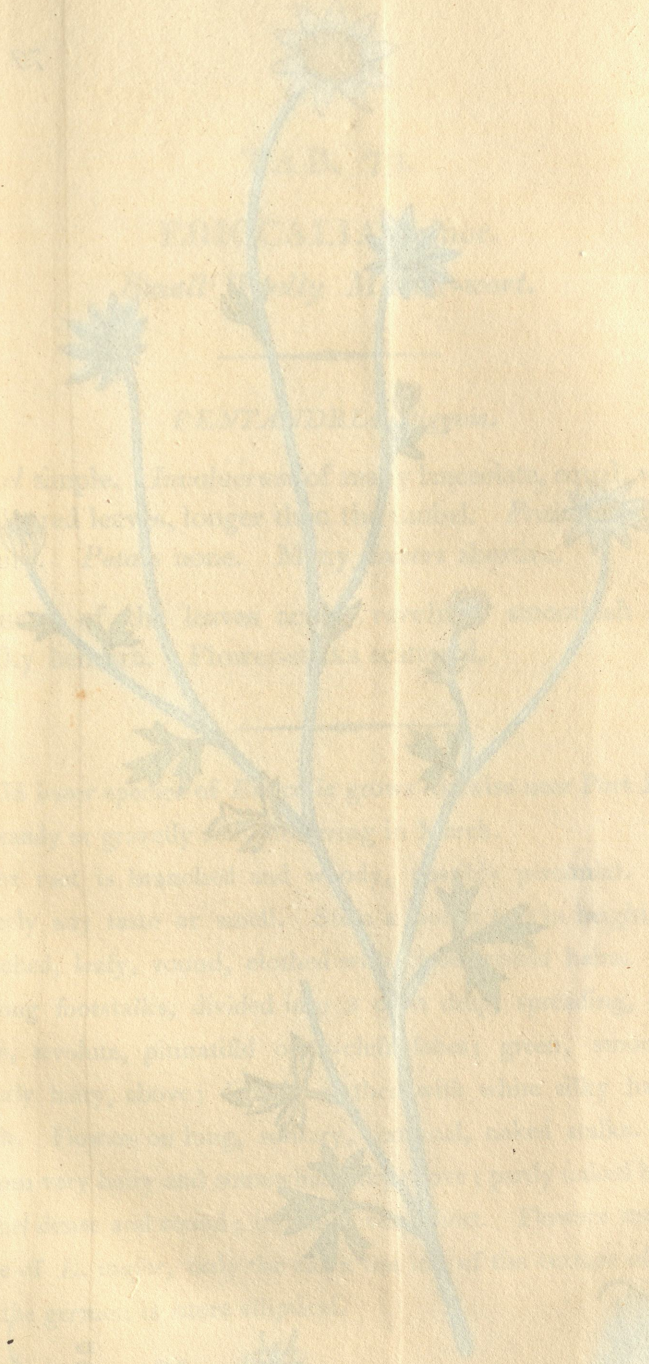
We have named this new genus *Eriocalia*, from εριον wool, and καλια a nest. It belongs to the umbelliferous order, being one of those few whose umbel is simple, not compound; and it ranges next to *Astrantia*, from which the generic character above clearly distinguishes it.

E. major appears to be annual, but on this head we have no information. We are only informed of its growing near Port Jackson in a sandy soil, and blossoming in October.

The root is branching and woody. Stem solitary, about 2 feet high, erect, leafy, round, woolly, but little branched except at the upper part, where the long flower-stalks, more or less numerous, grow in a corymbose form. Leaves alternate, stalked, 3-cleft,

lobed and pinnatifid; their segments spreading, linear, entire, flat, a little dilated upwards, and bluntish; clothed with dense wool, whiter beneath. Stipulas none. Flowers terminal, large and showy, all over white with a green or rufous tinge. Involucrum coloured, spreading, much longer than the umbel, consisting of 8 or 10 lanceolate, acute, entire leaves, peculiarly soft and pliable, clothed on both sides with a dense velvet-like pubescence. Flowers very numerous, forming a compact, hemispherical, hairy umbel, those of the circumference abortive, having no germen. Calyx a little elevated, of 5 large, equal, ovate, concave, whitish leaves, hairy externally, and having the aspect of petals. Of real petals we have found none. Stamens in all the flowers, 5 in number, equal, awlshaped, white, with yellow roundish antheras projecting a little beyond the calyx. Styles 2, capillary, longer than the stamens. Stigmas simple. Germen obovate, compressed, densely clothed with long white silky hairs. The wool and hairs under the microscope appear to be compound, and more or less whorled. Ripe seeds we have not seen. No aromatic or pungent flavour is perceptible in any part.

A wool of the stem or leaves. B hair of the flower. C perfect flower. D section of the germen: all magnified.



Eriocalia minor.

March 1. 1806. Published by Jas Sowerby, London.

TAB. 79.

ERIOCALIA minor.

Small Woolly Master-wort.

PENTANDRIA Digynia.

Umbel simple. *Involucrum* of many lanceolate, equal, woolly, coloured leaves, longer than the umbel. *Fruit* compressed, hairy. *Petals* none. Many *flowers* abortive.

Segments of the leaves acute, revolute; smoothish above; silky beneath. Flower-stalks scattered.

THIS lesser species of *Eriocalia* grows likewise near Port Jackson in a sandy or gravelly soil, flowering in March.

The root is branched and woody, possibly perennial. It has scarcely any taste or smell. Stem a foot or two in height, much branched, leafy, round, clothed with close-pressed hairs. Leaves on long footstalks, divided into 3 or 5 deep, spreading, dilated, acute, revolute, pinnatifid or 3-cleft lobes; green, smooth, or slightly hairy, above; densely clothed with white silky hairs beneath. Flowers on long, solitary, terminal, naked stalks. Involucrum very hairy and somewhat silky above; partly naked beneath. Umbel dense and round; its stalks very short. Flowers much like those of *E. major*, only the calyx has less of the texture of petals, and the germen is more elliptical.

A hair of the flower-stalk. B abortive flower. C fertile flower. D stamen. E section of the germen.

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Hastingia coccinea

March 1. 1816. Published by Jas. Sowerby, London.

TAB. 80.

HASTINGIA coccinea.

Scarlet Hastingia.

DIDYNAMIA Gymnospermia.

Calyx bell-shaped, dilated, much wider than the corolla, slightly 5-cleft, unarmed, coloured.

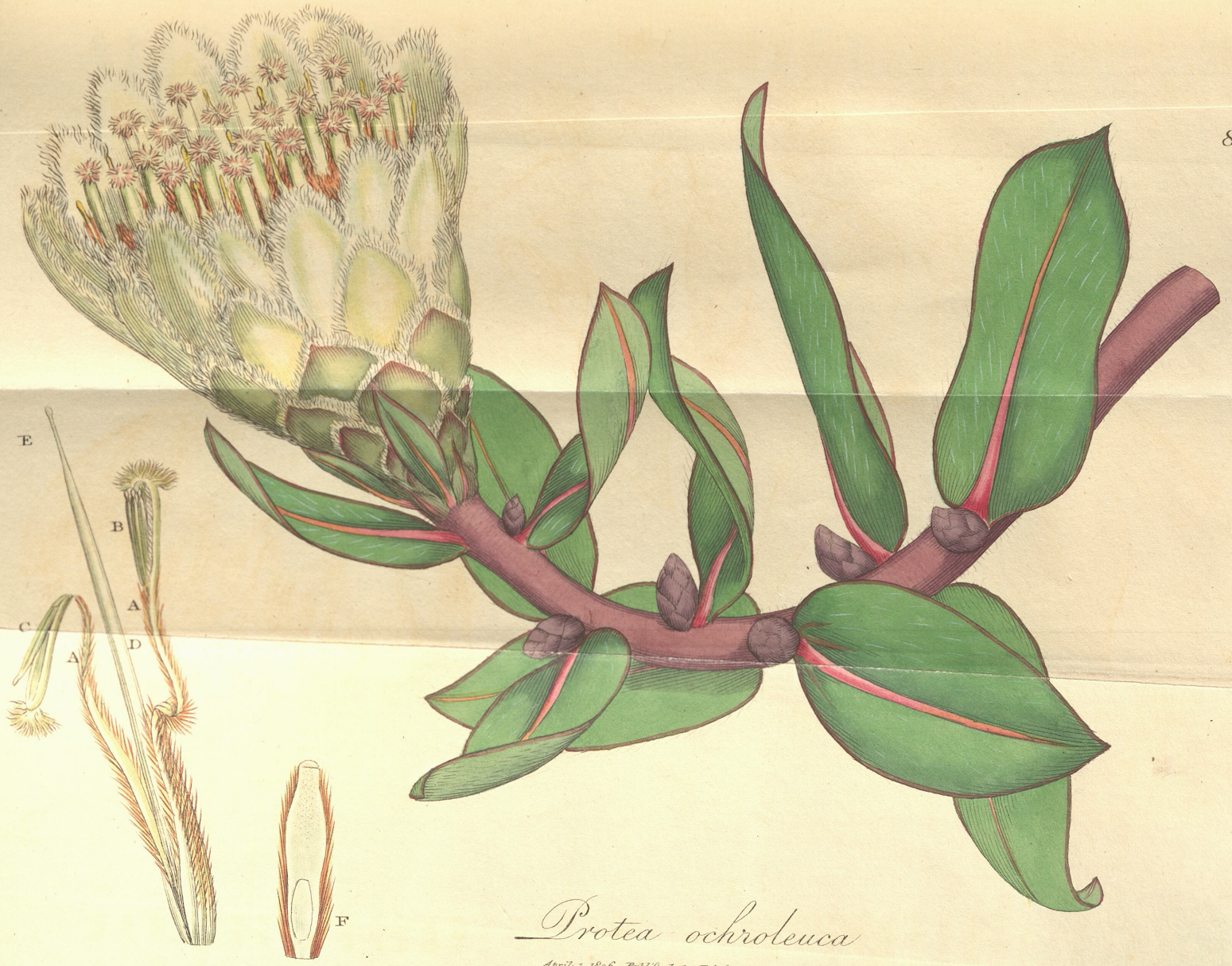
THIS splendid Indian shrub was long ago named by Koenig in honour of his munificent and intelligent patron, Governor Hastings; but it has hitherto remained unpublished. To Sir Joseph Banks we are obliged for a wild specimen, and to Lieutenant Colonel Hardwicke for a beautiful drawing made under his own inspection. This gentleman informs us that the *Hastingia* grows on the northern mountains of Bengal, flowering in February or March, and ripening seed in April; and that its country name is *Ghurhul-paharia*, which sonorous denomination we recommend to those who disapprove of Linnæan phraseology.

The stem is shrubby, smooth, roundish, with many opposite branches. Leaves opposite, on furrowed stalks, without stipulas, ovate, pointed, veiny, slightly serrated, almost perfectly smooth, dotted on both sides, paler beneath. Flowers in terminal, loose, bracteated bunches, of a vivid scarlet. Flowerstalks downy. Calyx permanent, bellshaped, large and spreading, veiny, slightly downy, as richly coloured as the corolla; its margin slightly 5-lobed and waved, destitute of teeth or spines. Corolla tubular, ringent, downy, longer than the calyx, but much narrower; its upper lip obtuse, cloven, with 2 lateral reflexed lobes; lower somewhat longer,

undivided, revolute, obtuse, crenate. Stamens all rather longer than the upper lip, downy, red, with pale-yellow antheras. Germen 4-lobed, downy, pale. Style as long as the longest stamens, curved, with a small, cloven, acute stigma. Seeds 4, in the bottom of the calyx, black, obovate, rough.

This genus should be inserted between *Phlomis* and *Moluccella*. Only one species is known.

a flower complete. *b* the same cut open. *c*, *c* lower lip. *d* permanent calyx and fruit. *e*, E seeds.



Protea ochroleuca

April 1. 1806. Published by Jas. Sowerby, London.

TAB. 81.

PROTEA ochroleuca.

Cream-coloured Protea.

TETRANDRIA Monogynia.

Common Calyx of many leaves, imbricated, many-flowered. *Petals* 4, bearing the stamens. *Nut* superior, closed, with 1 *seed.*

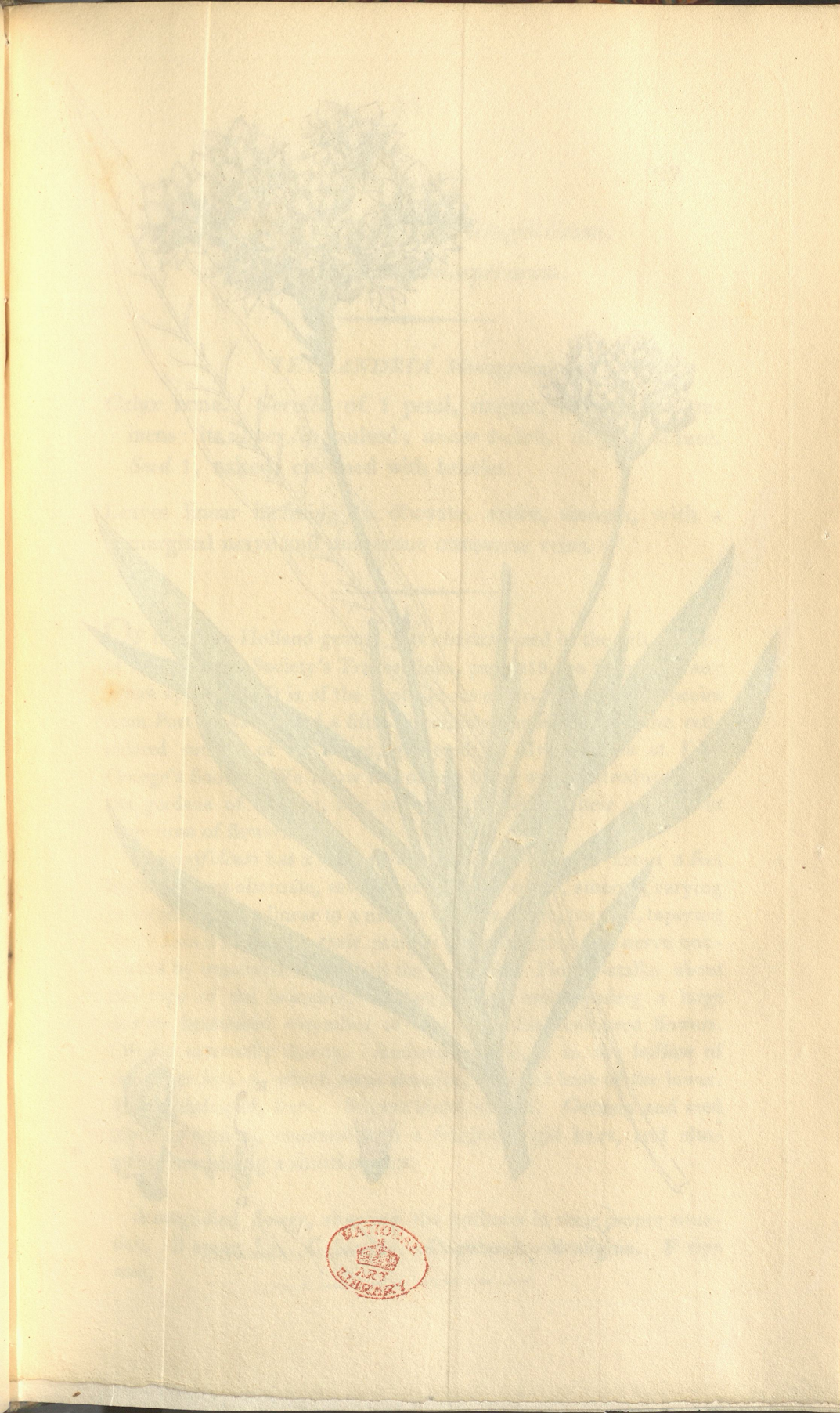
Leaves ovate-oblong, entire, nearly smooth. Head hemisphærical, terminal. Calyx-scales fringed with spreading hairs. Corolla hairy all over.

DRAWN from the collection of G. Hibbert, Esq., who received it, among many other botanical treasures, from the Cape of Good Hope. It is a quick-growing handsome greenhouse shrub, 6 feet or more in height, and flowered in January 1806. We have not found any figure or description in authors applicable to it, and have therefore given it a new name expressive of the colour of the flowers. It is most nearly akin to *P. grandiflora. Andr. Repos. t.* 301.

The branches are spreading, leafy, round, hairy. Leaves alternate, spreading, sessile, of an oblong form inclining to ovate, rigid, entire, smooth except when young, and having a thick red rib and a margin of the same colour. Flowers terminal, solitary, large, scentless, of a pale sulphur- or cream-colour. Scales broad, fringed with long fine silky divaricated hairs. Corolla very hairy all over. Three of the petals are united into one, bearing 3 antheras; the fourth is separate. Style thick. Stigma narrow and linear.

A, A corolla magnified. B 3 of the antheras. C the fourth. D style. E stigma. F section of the germen more magnified.

In the description of *P. rosacea, v.* 1. 86, *line* 4, for style, read stigma.



Conospermum longifolium

April 1. 1806. Published by Jas. Sowerby, London.

TAB. 82.

CONOSPERMUM longifolium.

Long-leaved Conospermum.

TETRANDRIA Monogynia.

Calyx none. *Corolla* of 1 petal, ringent, bearing the stamens: its *upper lip* vaulted; *under* 3-cleft. *Stigma* obtuse. *Seed* 1, naked, crowned with bristles.

Leaves linear inclining to obovate, entire, smooth, with a marginal nerve and numerous transverse veins.

OF this New Holland genus, first characterized in the 4th volume of the Linnæan Society's Transactions, page 213, no figure has any where appeared. It is of the Proteaceous order. We have 4 species from Port Jackson, and a fifth, extremely remarkable for the reticulated surface of its leaves, gathered by Mr. Menzies at King George's Sound. We know not of any being as yet introduced into the gardens of Europe, nor are we informed of their culture, or their time of flowering.

C. longifolium has a rigid shrubby stem, sometimes about 3 feet high. Leaves alternate, several inches long, entire, smooth, varying in breadth from a linear to a narrow obovate figure, pointed, tapering down into a footstalk; their margin marked with a fine nerve connected by transverse veins with the main rib. Flower-stalks about the tops of the branches, axillary, long, each bearing a large downy bracteated corymbus of white or blush-coloured flowers. Corolla externally downy. Antheras sessile, 2 in the hollow of the upper lip; 2, which seem abortive, near the base of the lower. Style clubshaped, bent. Stigma blunt, curved. Germen and seed inversely conical, crowned with a fringe of rigid hairs, and altogether resembling a shuttlecock.

A magnified flower, showing the antheras in their proper situation. B upper lip. C bractea. D germen. E stigma. F ripe seed.

Persoonia ferruginea

April 1. 1806. Published by J. Sowerby, London.

TAB. 83.

PERSOONIA ferruginea.

Rusty Persoonia.

TETRANDRIA Monogynia.

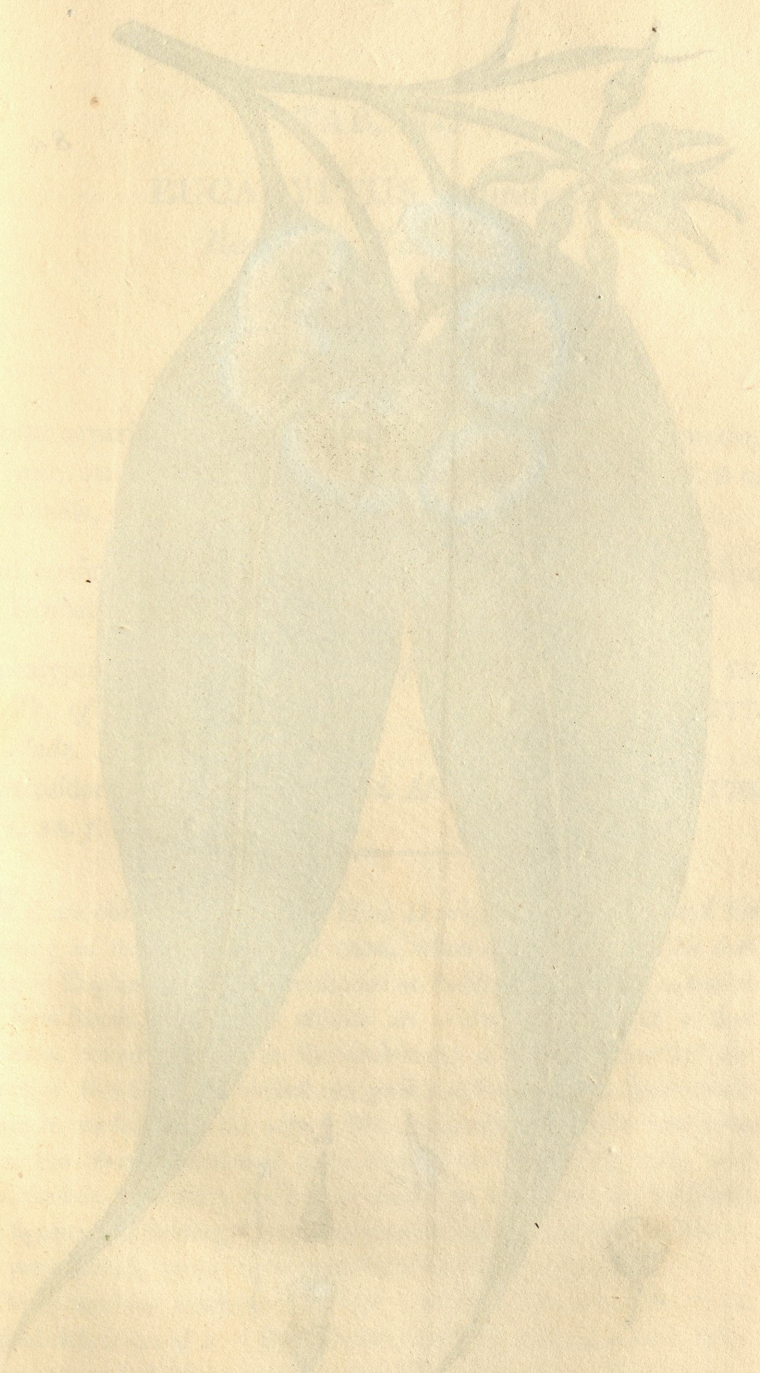
Calyx none. *Petals* 4, bearing the stamens towards their base. *Glands* 4 at the base of the germen. *Stigma* blunt. *Drupe* with 1 *seed.*

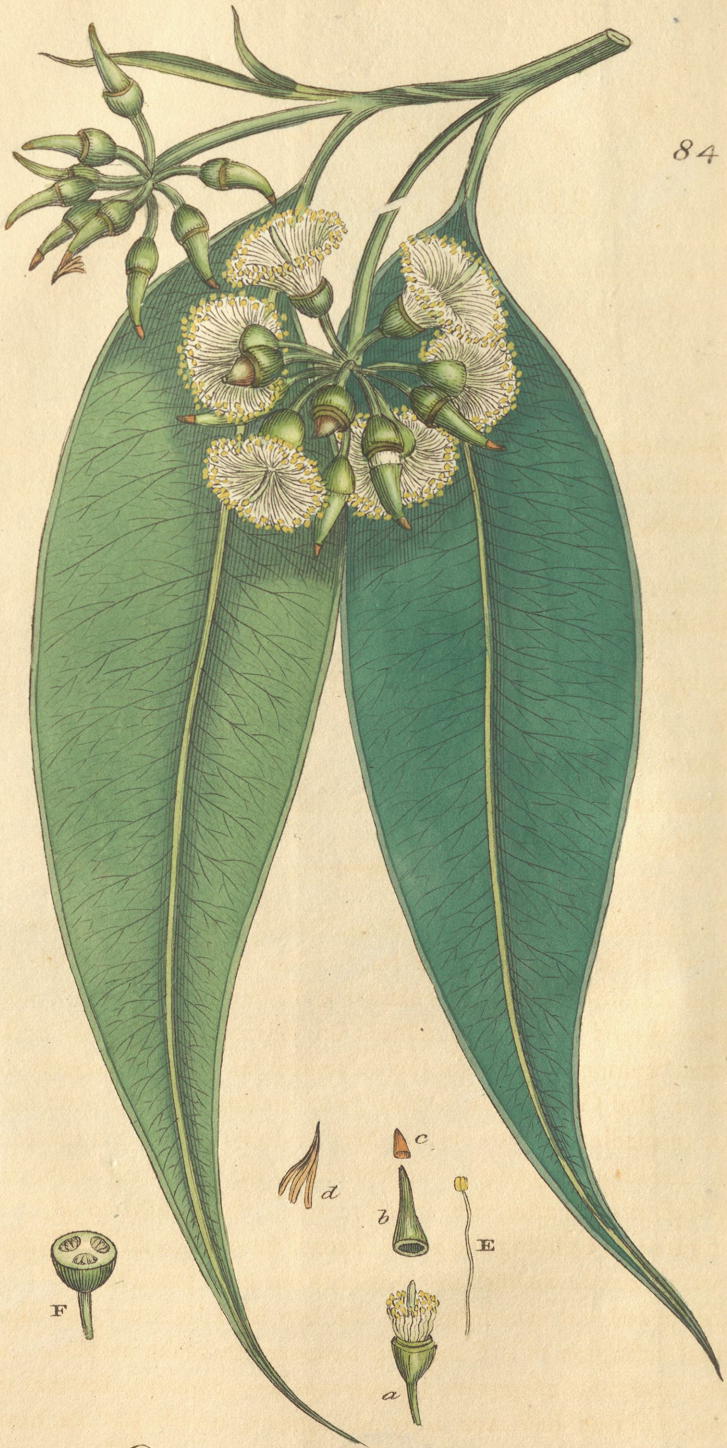
Leaves elliptical, smooth. Flowers silky, on axillary branched silky stalks.

SEVERAL species of this New Holland genus have been made known to the botanists of England by Mr. Andrews in his *Botanist's Repository*. Its characters were first given in the 4th volume of the Linnæan Society's Transactions, *p.* 215, and it was named in honour of Mr. C. H. Persoon, celebrated for his scientific works on *Fungi*. In the following year Professor Willdenow applied this name to a different genus in the second volume of his *Sp. Pl.*, not knowing that we had anticipated him.

P. ferruginea grows near Port Jackson, flowering in November. The stem is shrubby, 3 or 4 feet in height, branched. Leaves generally opposite, elliptical, broad, smooth, entire, on short stalks. Flowers 3 or 4 together, on short, branched, axillary stalks, accompanied by small bracteas. These stalks and bracteas, as well as the germen and the outside of the corolla, are thickly clothed with short silky hairs of a tawny or rusty colour. The inside of the corolla is smooth and bright yellow. Antheras linear, greyish, at length recurved. Style and stigma smooth. Fruit not known to us, but there can be no doubt of the genus, which seems allied in natural affinity to *Loranthus*.

A bractea. B petal and stamen. C germen and style.





Eucalyptus resinifera

April 1. 1806. Published by Jas. Sowerby, London.

TAB. 84.

EUCALYPTUS resinifera.

Red-Gum Eucalyptus.

ICOSANDRIA Monogynia.

Calyx superior, permanent, truncated, covered before flowering with an entire *lid*, which soon falls off. *Capsule* of 3 or 4 cells, opening at the top. *Seeds* numerous.

Lid conical, round, coriaceous, twice as long as the calyx. Umbels lateral, solitary. Leaves ovate, long-pointed.

Eucalyptus resinifera. *Sm. in White's Voyage*, 231. *t.* 25. *Tr. of Linn. Soc. v.* 3. 284. *Willd. Sp. Pl. v.* 2. 977. *Andr. Repos. v.* 6. *t.* 400.

Metrosideros gummifera. *Soland. Mss. Gærtn. Sem. v.* 1. 170. *t.* 34. *f.* 1.

WE are obliged to the Right Hon. Dowager Lady De Clifford for sending us this plant in April 1804, when it flowered, for the first time in England, in her greenhouse at Paddington. It is a native of New South Wales, and affords an astringent resin, of a fine crimson colour, known in the settlement at Port Jackson by the name of Red Gum, of which no great use has, as yet, been made either in medicine or the arts. Mr. Andrews procured a specimen from the above-mentioned collection in the following July, and published it soon after, for which reason we have hitherto withheld our figure; but finding the genus wanted further elucidation than it has yet received, we wish to contribute our mite towards it.

This genus was established by the late M. L'Heritier, in whose original definition of it I found it necessary to make a double alteration, *operculo integerrimo* for *operculo hemisphærico*, for that excellent observer had seen only one species, which has an hemisphærical lid, nor had he adverted to its being perfectly entire at the

edge, which is not so completely the case with a similar genus, the *Calyptranthes* of Swartz. The learned Jussieu adopted *Eucalyptus* entirely from L'Heritier, without ever seeing a specimen himself. In such cases he always informs us whom he copies, that we may know where the responsibility is attached. The lid was universally believed to be single, till Mr. J. D. Sowerby discovered an external one (figured by Mr. Andrews), and what is still more remarkable, an additional covering, of 3 awlshaped bodies cohering by their points, whose bases seem to originate from the 3 angles of the germen or calyx. The detection of these outer parts countenances M. Jussieu in naming the inner lid a petal; but it is so peculiar, that we venture to retain a different name; nor do we know how far the double or triple lid is common to all the species. On this subject full information is to be expected from the acute investigations of Mr. R. Brown, Librarian to the Linnean Society, and Mr. F. Bauer, who are returned from New Holland with finer drawings, and more ample collections than have yet been brought from those remote regions, and whose species of *Eucalyptus* are, as I hear from Mr. Brown, peculiarly numerous.

E. resinifera grows in its own country to a large tall tree. The natives cut notches in its stem, and climb it in pursuit of various small quadrupeds who take shelter in the branches. With us it is a hardy greenhouse shrub, remarkably tardy in its mode of flowering, for the buds are formed a year before they expand. The branches droop elegantly. The leaves are alternate, on short stalks, smooth, ovate, entire, tapering to a long sharp point, more or less unequal at the base. Flowers green, in axillary solitary simple umbels, on compressed stalks. Stamens forcing off the lid, and then spreading, numerous, white, with yellow antheras. Style clubshaped, angular. Capsule of 3 cells.

a germen, calyx, stamens and style. *b* inner lid, or petal. *c* outer lid. *d* covering of the outer lid. E magnified stamen. F section of the germen.

Mespilus tanacetifolia

March 1. 1806. Published by Jas. Sowerby, London.

TAB. 85.

MESPILUS tanacetifolia.

Tansy-leaved Hawthorn.

ICOSANDRIA Pentagynia.

Calyx in 5 segments. *Petals* 5. *Drupe* inferior. *Nuts* 2 to 5, with 2 *seeds* each.

Thorns terminal. Leaves obtuse, pinnatifid, cut, downy on both sides. Stipulas cloven. Flowers corymbose. Styles five.

Mespilus orientalis, tanaceti folio villoso, magno fructu pentagono e viridi flavescente. *Tourn. Cor.* 44. *Voyage, v.* 2. 171. *t.* 172.

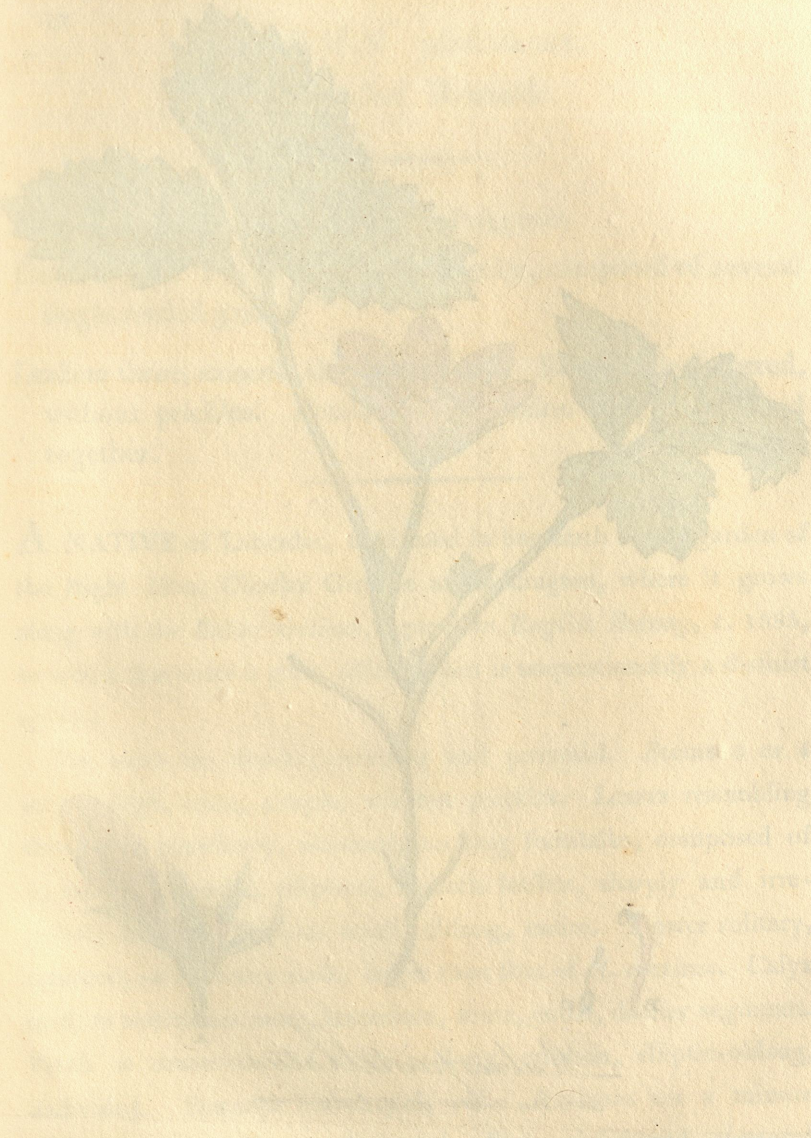
SEEDS of this shrub were received by Messieurs Lee and Kennedy from Constantinople, and it has for many years flourished in their nursery, whence our figure was taken. Though so well described and figured by Tournefort in his Voyage, succeeding writers have not admitted it into their systematic works. It is, nevertheless, well worthy the notice of the botanist and the cultivator, being a most distinct species, quite hardy with us, singular and ornamental in its aspect, and remarkable for the fragrant hawthorn scent of its flowers. Mr. Hawkins informs me that it grows on all the high mountains of Greece. I suspect however that two varieties, if not species, are found there, both described by Tournefort in the page above quoted, and gathered by him on the northern mountains of Natolia, and both in Dr. Sibthorp's Greek herbarium. Of one of them only, with small red fruit, I find an outline among his unfinished sketches.

Our plant blossoms in June, and is a strong and rigid shrub, already 8 or 10 feet high in the gardens, the branches divaricated, downy when young, each terminating in a strong simple thorn. Leaves numerous on the young branches, alternate, on short foot-

stalks, somewhat wedge-shaped, deeply pinnatifid, sharply serrated at their extremities, veiny, very downy on both sides, deciduous. Stipulas cloven, glandular. Flowers terminal, corymbose, cream-coloured, twice or thrice as large as the common Hawthorn, and much more fragrant. Their stalks and calyx are downy. Stamens 20, 3 opposite to each petal, and 1 to each segment of the calyx. Styles 5. Fruit of a tawny yellow, round, half an inch or more in diameter, with the flavour of an apple, and containing 5 hard seeds or stones.

This shrub confirms the propriety of referring the Hawthorn to the genus *Mespilus*. That it is what Tournefort has figured, cannot, we presume, be doubted, though he did not observe the thorns, and though he has described the fruit rather larger, and more furrowed, than we have seen it. We have observed it to vary in this respect.

a shows a section of the flower. *b* one of the ripe seeds, crowned with its permanent style.



Rubus pistillatus.

Nov.r 1. 1805. Published by Jas. Sowerby, London.

TAB. 86.

RUBUS pistillatus.

Close-styled Bramble.

ICOSANDRIA Polygynia.

Calyx 5-cleft. *Petals* 5. *Berry* superior, composed of several single-seeded grains.

Leaflets three, smooth, sharply serrated. Stem single-flowered, without prickles. Petals oblong, entire. Styles clustered together.

A NATIVE of Labrador, cultivated in bog earth in the garden of the Right Hon. Charles Greville at Paddington, where it grows along with the *Rubus arcticus*, figured in *English Botany*, *t.* 1585, to which this bears a great affinity, but is unquestionably a distinct species.

The roots are slender, creeping and perennial. Stems 3 or 4 inches high, erect, simple, without prickles. Leaves resembling those of a strawberry, alternate, on long footstalks, composed of 3, not quite sessile, elliptical, smooth leaflets, sharply and irregularly serrated. Stipulas small, oblong, entire. Flower solitary, terminal, on a downy stalk, larger than that of *R. arcticus*. Calyx in 6, or sometimes more, lanceolate, acute, entire, downy segments. Petals as numerous and twice as long, crimson, elliptic-oblong, undivided. Stamens clubshaped, red. Antheras on a minute stalk, roundish. Germen depressed. Styles clubshaped, clustered together like one simple pistil. The fruit we have not seen. The flowers are produced about June.

A section of the flower, showing the combined styles, a little magnified. B a stamen. C a separate germen and style.

Phlox pyramidalis

May 1. 1806. Published by Jas. Sowerby, London.

TAB. 87.

PHLOX pyramidalis.

Pyramidal Phlox.

PENTANDRIA Monogynia.

Calyx prismatic, in 5 segments. *Corolla* salver-shaped. *Filaments* unequal in length. *Stigma* 3-cleft. *Capsule* of 3 cells. *Seeds* solitary.

Leaves ovate or heart-shaped, pointed, smooth. Stem rough. Flowers in a dense pyramidal cluster. Calyx-teeth nearly straight.

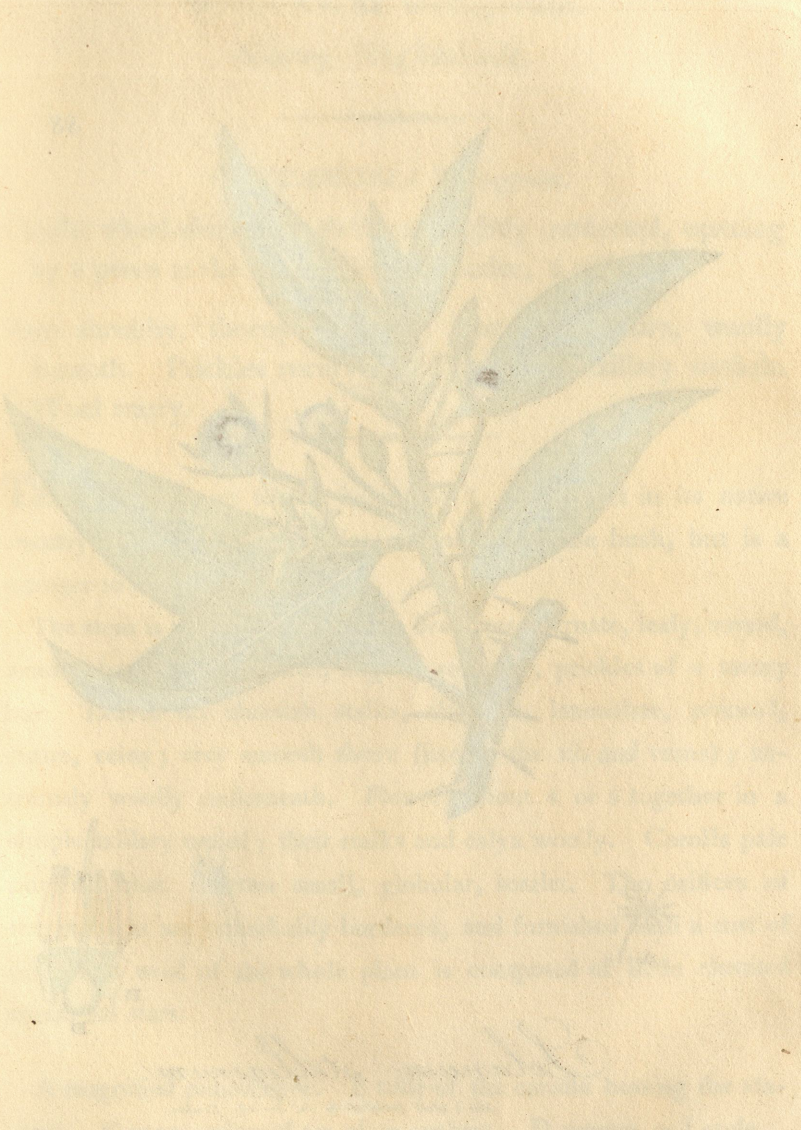
Phlox pyramidalis. *Donn. Cant.* 30.

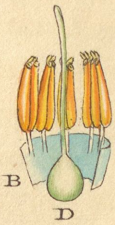
A HANDSOME North American perennial plant, which thrives well in the open ground at Messieurs Lee and Kennedy's, rising to the height of 3 feet, and flowering in August. The flowers have a very sweet honey-like scent.

It is closely allied to *Phlox maculata*, with which it is, even in the Linnæan Herbarium, confounded, and we presume Jacquin's *Hort. Vind. v.* 2. *t.* 127, hitherto taken for *Phlox maculata*, to be rather the plant before us.

The real *maculata* has much longer and narrower, almost linear leaves, not quite so rough a stalk, and a more slender and cylindrical bunch of flowers. Its calyx-teeth are very much recurved; by which last mark it seems to us the two species may readily be distinguished, even if the difference of breadth in the leaves should not prove constant.

a calyx and style. B magnified stigma. *c* corolla opened to show the different lengths of the stamens.





Solanum stelligerum

May 1. 1806. Published by Jas Sowerby, London.

TAB. 88.

SOLANUM stelligerum.

Starry Nightshade.

PENTANDRIA Monogynia.

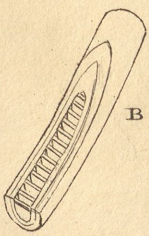
Corolla wheel-shaped. *Antheras* slightly connected, opening by 2 pores at the top. *Berry* superior, 2-celled.

Stem shrubby, thorny. Leaves lanceolate, entire, woolly beneath. Prickles recurved. Flowers in axillary umbels. Wool starry.

THIS shrub grows to the height of 3, 4 or 5 feet in its native country of New South Wales, forming a dense bush, but is a stranger to our gardens.

The stem is much branched, the branches alternate, leafy, round, woolly, beset with scattered, slightly recurved, prickles of a tawny hue. Leaves on shortish stalks, alternate, lanceolate, pointed, entire, veiny; very smooth above (except the rib and veins); extremely woolly underneath. Flowers about 4 or 5 together in a simple axillary umbel; their stalks and calyx woolly. Corolla pale purplish blue. Berries small, globular, scarlet. The orifices of the antheras are remarkably bordered, and furnished with a sort of lid. The wool of the whole plant is composed of little elevated entangled stars.

A magnified pubescence. B tube of the corolla bearing the stamens. C more enlarged tip of an anthera. D germen and style.



Andromeda acuminata

May 1. 1806. Published by Jas. Sowerby, London.

TAB. 89.

ANDROMEDA acuminata.

Acute-leaved Andromeda.

DECANDRIA Monogynia.

Calyx 5-cleft. *Corolla* ovate; its orifice 5-cleft. *Capsule* superior, 5-celled; the partitions from the middle of the valves. *Antheras* with 2 pores.

Clusters axillary, simple. Leaves ovato-lanceolate, pointed, polished, unequally serrated.

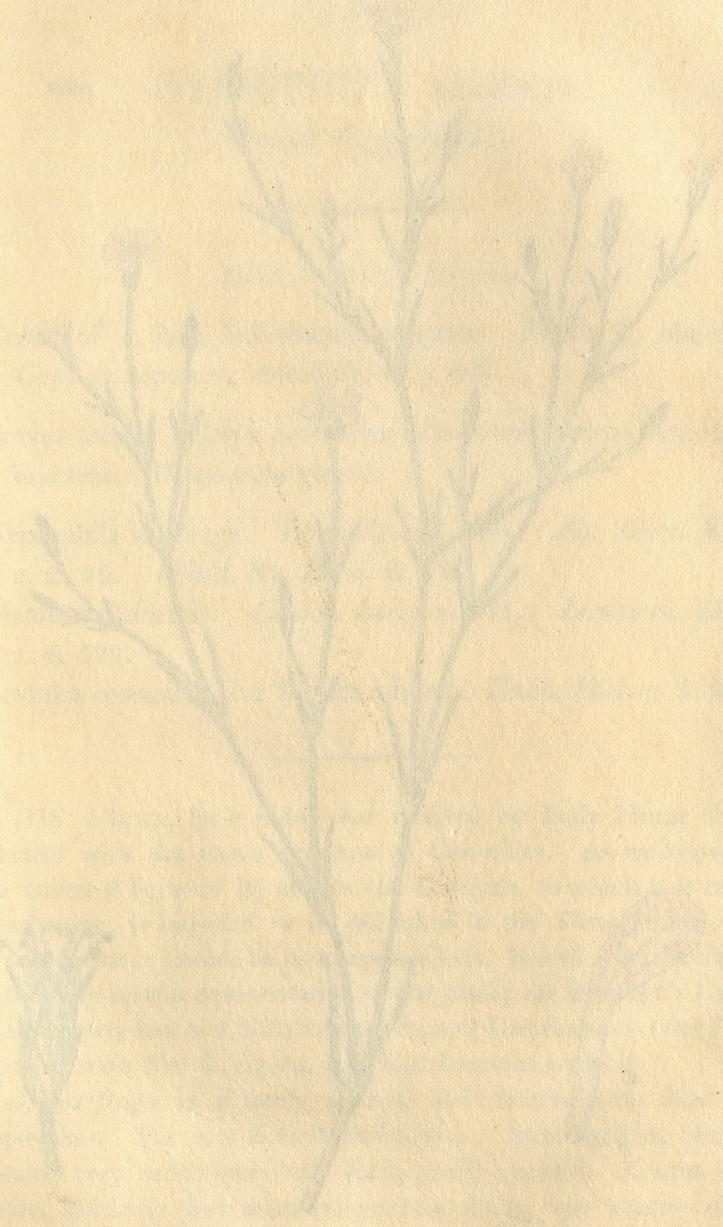
Andromeda acuminata. *Ait. Hort. Kew. v.* 2. 70. *Willd. Sp. Pl. v.* 2. 613. *Donn. Cant.* 79.
A. lucida. *Jacq. Ic. Rar. v.* 1. *t.* 79. *Coll. v.* 1. 95.

WE know not why the excellent name under which Jacquin published this plant was allowed, in so classical a work as the *Hortus Kewensis*, to give place to an unpublished and less eligible one of Mr. L'Heritier, whose volume there cited has never appeared. We acknowledge that in these cases deference is due to superior botanical authority, without which barbarisms of every kind would soon overwhelm the science; but no such superiority could be claimed here. It would now, however, be troublesome and unjustifiable to restore what is become obsolete.

This is an elegant North American shrub, hardy enough in our climate, growing well in bog earth, but not always flowering. We received it from the garden of the Right Hon. Charles Long, near Bromley, early in September last. The stems are 2 or 3 feet high; branches round, smooth, mostly zigzag. Leaves alternate, on short stalks, evergreen, very smooth and shining, lanceolate

inclining to ovate, sharp-pointed, unequally and sharply serrated, (which Jacquin's figure does not express,) their substance finely reticulated with veins. Flowers numerous, white, drooping, in simple, short, axillary, bracteated clusters; their stalks and calyx glandular. Stamens 10, fringed. Antheras tawny, beardless. The fading corolla turns to a rusty hue. The branches are hollow, but interrupted by frequent transverse membranous partitions, a structure observable in the pith of many other plants.

A shows the magnified flowerstalk, calyx, germen, and style, with 1 stamen. B a section of the pith.



Gypsophila saxifraga

May 1. 1806. Published by Jas. Sowerby, London.

TAB. 90.

GYPSOPHILA saxifraga.

Small Gypsophila.

DECANDRIA Digynia.

Calyx of 1 leaf, bell-shaped, angular. *Petals* 5, obovate. *Capsule* superior, roundish, of 1 cell.

Leaves linear. Calyx accompanied by four unequal lanceolate bracteas. Petals emarginate.

Gypsophila saxifraga. *Linn. Sp. Pl.* 584. *Ait. Hort. Kew. v.* 2. 86. *Willd. Sp. Pl. v.* 2. 666.

Dianthus filiformis. *Cavan. Leccion.* 471. *Lamarck. Dict. v.* 4. 523.

Betonica coronaria, sive Tunica minima. *Bauh. Hist. v.* 3. 337.

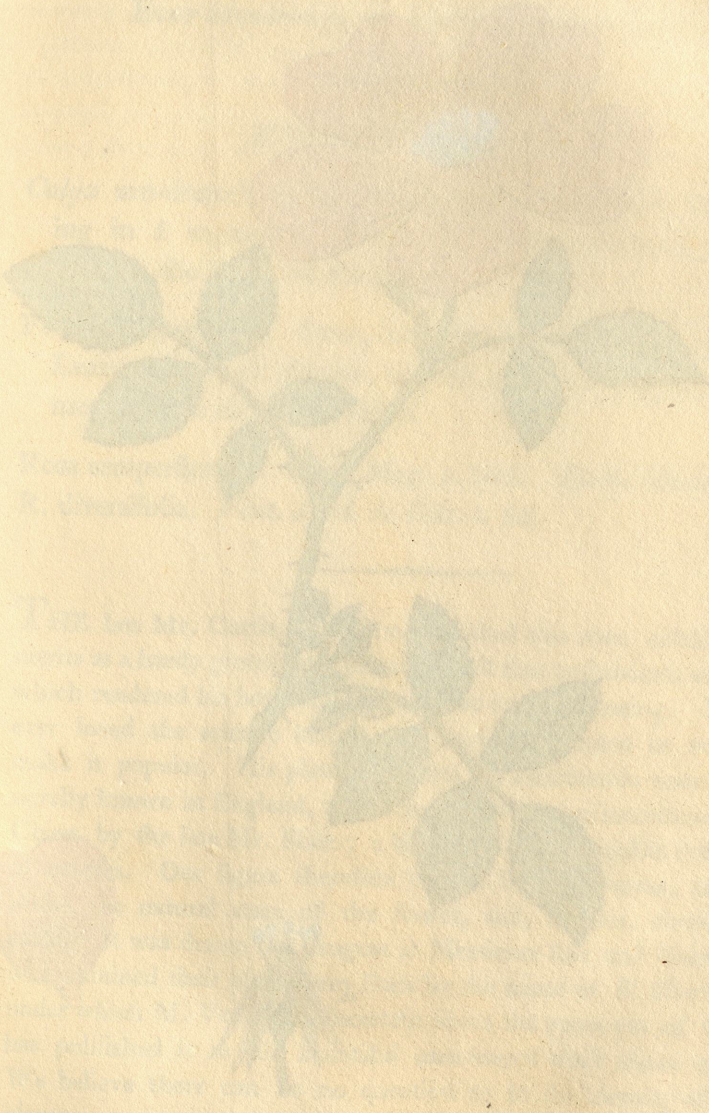
THIS delicate little plant was received by Lady Hume from Madrid with the above synonym of Cavanilles. As we know of no coloured figure of it, and as the *G. rigida*, to which it is most nearly akin, is intended to be published in the *Flora Græca*, we presume that it cannot be unacceptable here. Indeed John Bauhin's is the only certain representation of our plant; for Barrelier's *t.* 998 is either very bad or a different species, and Dalechamp's 1191 *f.* 2, is rather more like *G. rigida*, to which Linnæus refers it.

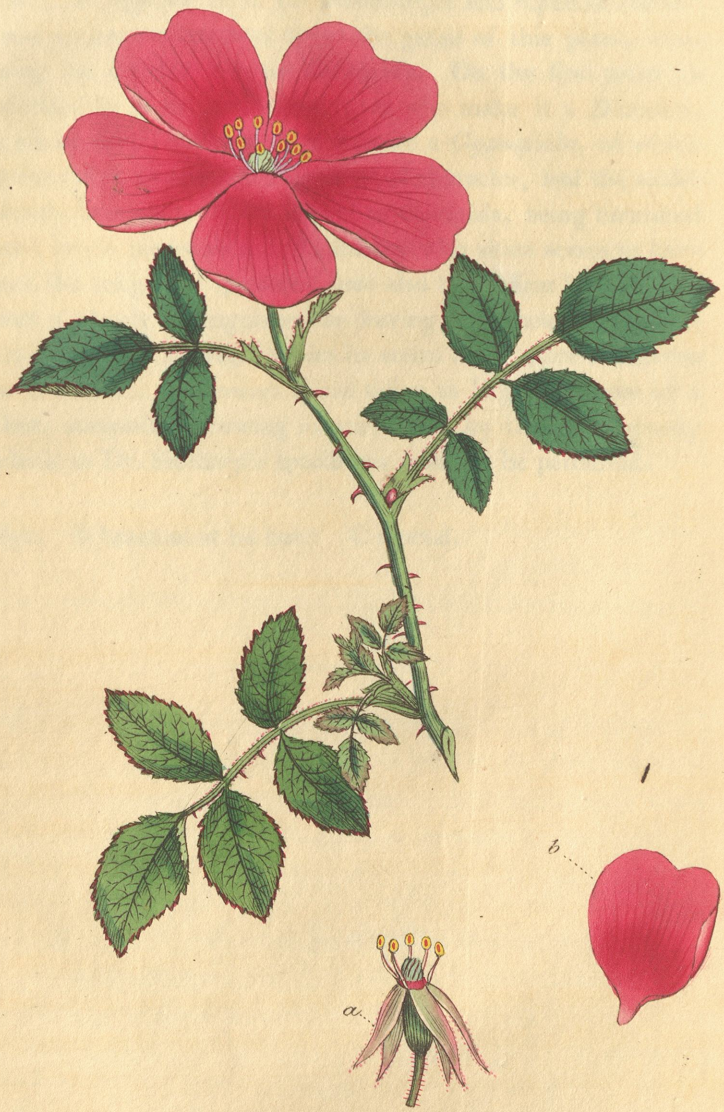
G. saxifraga is a hardy annual, and flowers from June to September. The root is small and fibrous. Stem upright, round, slender, very much branched, leafy, nearly smooth. Leaves opposite, united by their membranous base, linear, very narrow, flat, smooth, somewhat pointed, varying in length. Flowers terminal, solitary, erect, each accompanied by 2 pair of lanceolate, membranous, keeled, pointed bracteas, crowded almost close to the

base of the calyx. The calyx itself is bell-shaped, with 5 angles, and a membranous edge. Petals obovate, more or less emarginate, pale pink with 3 rose-coloured stripes; the claws greenish. Stamens 10, all fertile. Styles as long as the stamens. Capsule almost globular.

Linnæus, as appears from his manuscripts and repeated corrections, was no less embarrassed about the genus of this plant, than concerning its difference from *G. rigida*. On the first point he surely decided far more justly than those who make it a *Dianthus*, for the whole habit and structure indicate a *Gypsophila*, of which the angular calyx constitutes the essential character, and the scales are evidently bracteas. With respect to *G. rigida*, being furnished with more ample materials than Linnæus, who alone seems to have attempted the subject, I presume here also to confirm his opinion. The latter is clearly distinguished by having the bracteas ovate, all equal and placed on a level, besides its stems being more numerous and less branched, its flowers above twice as large and more of a purple hue, sometimes growing in pairs, and by the more woody root, which in Dr. Sibthorp's specimens seems to be perennial.

A calyx. B bracteas at its base. C a petal.





Rosa semperflorens

June 1. 1806. Published by Jas Sowerby, London.

TAB. 91.

ROSA semperflorens.

Ever-blooming, or Dark Chinese Rose.

ICOSANDRIA Polygynia.

Calyx urn-shaped, fleshy, contracted at the orifice, terminating in 5 segments. *Petals* 5. *Seeds* numerous, bristly, fixed to the inside of the calyx.

Fruit ovate, smooth. Stem, leafstalks and flowerstalks prickly. Leaves ternate or pinnate, smooth, glaucous beneath. Segments of the calyx undivided.

Rosa semperflorens. *Curt. Mag. t.* 284. *Donn. Cant.* 98.
R. diversifolia. *Vent. Jard. de Cels. t.* 35.

THE late Mr. Curtis, who first published this rose, celebrates its merits as a hardy greenhouse plant with all that enthusiasm and taste which rendered his botanical character so very interesting. No one ever loved the science better; few have contributed so much to make it popular. His plate represents the semidouble variety, generally known in England, which he informs us was introduced from China by the late Mr. Slater, a liberal and indefatigable cultivator of exotics. Our figure therefore cannot be superfluous, as it exhibits the natural state of the flower, and, besides, displays its parts. It was drawn last August at Messieurs Lee and Kennedy's, who obtained their plant from Paris by the name of *R. diversifolia*, under which M. Ventenat, uncertain about the synonym of Curtis, has published it in his beautiful uncoloured work above quoted. We believe there can be no question as to the identity of these plants.

This little shrub bears our climate tolerably well in the open ground. We have seen the double kind in bloom amid frost and snow at Christmas. Yet like many of its genus it is uncertain and

variable in the vigour of its growth. It must not be kept too wet in the winter.

The stems are slender, zigzag, round, clothed with small hooked prickles. Leaflets 3 or 5 on a prickly stalk, ovate, doubly serrated, smooth on both sides, glaucous beneath, often reddish all over. Flowerstalks terminal, for the most part solitary, round, glandular or prickly, single-flowered. Calyx-leaves reflexed, lanceolate, pointed, undivided, downy, more or less fringed or glandular at the edge. Petals obcordate, of a rich crimson varying in darkness. The double flowers have a faint sweet smell, at least in a warm room, resembling that of the Harebell.

a calyx, germen and styles, with a few of the stamens. *b* petal.

f
f

Dillenia aurea

June 1. 1806. Published by Jas Sowerby, London.

f
f

Dillenia aurea.

June 1. 1806. Published by Jas Sowerby, London.

TAB. 92, 93.

DILLENIA aurea.

Golden Dillenia.

POLYANDRIA Polygynia.

Calyx inferior, of *5* coriaceous permanent leaves. *Petals 5.* *Capsules* several, compressed, many-seeded, ranged circularly round a pulpy receptacle.

Leaves elliptic-oblong, doubly serrated. Flowers mostly solitary. Stigmas linear.

To the same splendid collection of drawings which afforded us *Dillenia indica, tab. 2, 3,* we are indebted for the present new East Indian species of the same genus, which was found by Lieutenant Colonel Hardwicke in jungles or thickets to the east of the river Gogra. It flowers in April, ripens fruit in May, and is called in its native country *Aguee* or *Aukee.* In the Panga jungles of Rungpore it is denominated *Tykaal,* and it has also a Persian name *Aum.* Of the uses or qualities of this tree we have no account. Its beauty is sufficiently apparent.

Having seen no specimens, we can add nothing to what the drawing exhibits. The leaves are deciduous, and the fresh ones seem scarcely to be full-grown by the time the fruit is ripe. The above specific character distinguishes it from every other known species, whether hitherto published or not.

Tab. 92. *a* germen. *b* stigmas. *c* stamens. Tab. 93. *d* ripe fruit, the pulpy permanent calyx being artificially expanded. *e* transverse section of the fruit. *f* one of the cells expanded, showing the seeds attached to its inner margin.

Leonurus sibiricus

June 1. 1806. Published by Jas. Sowerby, London.

TAB. 94.

LEONURUS sibiricus.

Siberian Motherwort.

DIDYNAMIA Gymnospermia.

Calyx with 5 angles and 5 teeth. *Upper lip* of the corolla concave, shaggy, undivided. *Antheras* sprinkled with shining dots.

Leaves in three deep divisions, their lobes jagged, bluntish. Upper lip of the corolla straight.

Leonurus sibiricus. *Linn. Sp. Pl.* 818. *Willd. Sp. Pl. v.* 3. 117. *Donn. Cant.* 112.

THIS biennial plant is, though a native of the East Indies as well as China and Siberia, in a manner naturalized in the Right Hon. Charles Greville's garden at Paddington, where it sows itself every year over the open borders, and flowers in August.

The stem is square, branched, 2 or 3 feet high, clothed with silky deflexed hairs. Leaves very various in the breadth and number of their subordinate segments, but they are always divided into 3 principal ones, which are jagged, bluntish, veiny, more or less downy. Flowers in numerous dense whorls, with narrow awlshaped bracteas. Calyx silky. Corolla rose-coloured, larger and more beautiful than that of *L. tataricus*, figured in Miller's *Icones*, *t.* 80, and differing from it in having its margin straight, not reflexed. This character, pointed out by Professor Willdenow, we find to hold good even in the Linnæan dried specimens; but still we are inclined to think with Gmelin (*Fl. Sib. v.* 3. 239), who gathered those specimens, that they are mere varieties. The calyx is either spinous or not occasionally.

A shows a bractea and calyx rather magnified. B corolla opened, with the stamens. C a double ring of glands in its tube, with whose use we are unacquainted.

Erythrina crista-galli

June 1 1806. Published by Jas Sowerby, London.

TAB. 95.

ERYTHRINA Crista galli.

Cock's-comb Coral-tree.

DIADELPHIA Decandria.

Calyx 2-lobed. *Standard* much longer than the keel. *Wings* minute. *Pod* cylindrical, with many convex seeds.

Leaves ternate, ovate, smooth, with prickly glandular stalks. Calyx smooth, slightly pointed.

Erythrina Crista galli. *Linn. Mant.* 99. *Ait. Hort. Kew. v.* 3. 9. *Lamarck. Dict. v.* 2. 391.

FOR this splendid plant we are obliged to our worthy and very intelligent friend Mr. John Shepherd, Curator of the Botanic Garden Liverpool, by whose skill and exertions alone that extensive collection could have so soon been brought to its present perfection.

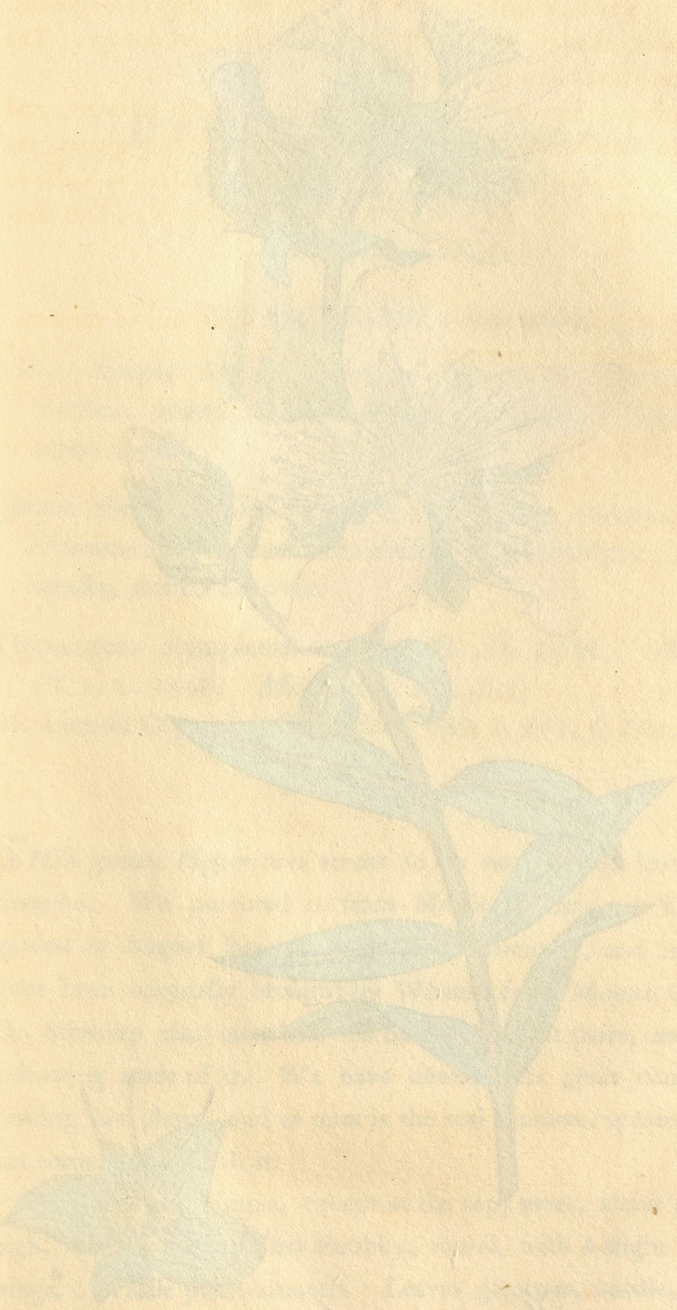
Mr. Shepherd raised this plant from East Indian seeds in 1802, though it is said to be of South American origin. It is kept in the bark stove, and flowered in the summer of 1805; but our specimen was produced in February last, being the finest that has hitherto appeared. It accords with the single flower sent by Vandelli to Linnæus, as well as with his rude drawing, and more accurate description.

The plant at Liverpool is at present slender, and about 6 feet high; its branches round, furnished, as well as the leaf-stalks, with a few hooked prickles. Every part, except the germen, is destitute of pubescence. Leaves ternate; leaflets ovate, entire, stalked, with prickly ribs. A pair of glands are placed at the base of the partial footstalks. Flower-stalks clustered, terminal and axillary, short and simple. Flowers of a rich unpolished deep red. Calyx bell-shaped, with 2 small bracteas at its base; its margin slightly 2-lobed, membranous, with 2 little teeth, one of which is hooked. Keel of 1 petal, more than half as long as the standard.

Wings very small, slightly 3-lobed. Stamens truly diadelphous. Stigma small, simple, or slightly capitate. Germen downy. The fruit we have not seen.

The monopetalous keel, the perfectly diadelphous stamens, and the form of the stigma, do not properly belong to this genus, yet the habit is such that it would be rash on those characters alone to form a new one. In some other species the calyx is no less anomalous.

a shows the keel separate. *b* a wing. *c* the 9 united stamens. *d* the separate one. *e* stigma.



Hypericum olympicum.

July 1.1806. Publish'd by Jas. Sowerby, London.

TAB. 96.

HYPERICUM olympicum.

Olympian St. John's Wort.

POLYADELPHIA Polyandria.

Calyx deeply 5-cleft, inferior. *Petals* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Capsule* with many seeds.

Styles three. Calyx-leaves ovate, acute, unequal in size. Stamens shorter than the corolla. Leaves elliptic-lanceolate, sessile, dotted all over.

Hypericum olympicum. *Linn. Sp. Pl.* 1102. *With. Sp. Pl. v.* 3. 1446. *Mill. Ic. t.* 151. *f.* 1.
H. montis Olympi. *Dill. Elth.* 182. *t.* 151. *f.* 183.

THIS pretty *Hypericum* seems to be not so well known as it deserves. We procured it from Messieurs Lee and Kennedy's garden in August last. It is a hardy perennial, and is said to have been originally brought by Wheeler from Mount Olympus. Dr. Sibthorp also mentions his having found it there, and having a drawing made of it. We have nevertheless great doubts concerning his plant; and as ours is the real Linnæan species, we do not scruple to publish it.

The stems are simple, except at the top, erect, about 18 inches high, scarcely to be called shrubby, round, with 4 slight angles or wings. Whole plant smooth. Leaves glaucous, sessile, elliptic-lanceolate, entire, more or less acute, thickly dotted all over with pale pellucid spots, and marked with a marginal row of dark ones.

Flowers on a few short terminal stalks or branches, yellow, with but little scent. Calyx-leaves ovate, acute, broad, unequal in size, not glandular. Petals twice as long as the calyx, oblique, not dotted at the margin, often marked with a small lateral tooth. Stamens about the length of the calyx, in 3 principal sets. Styles 3, thread-shaped, with small bluntish stigmas. The Germen when bruised has a saccharine scent.

a shows the calyx, germen and styles.

Epidendrum præcox.

July 1.1806. Published by Jas Sowerby, London.

TAB. 97.

EPIDENDRUM præcox.

Purple Fringed Epidendrum.

GYNANDRIA Diandria.

Nectary a lip tubular at the base, attached to the fore part of the column, without a spur. *Lid* vertical.

Stalks radical, without leaves, single-flowered, bulbous at their base. Lip of the nectary fringed, marked with five rough lines.

My excellent friend and fellow-student Dr. Francis Buchannan having most generously put me into possession of all his drawings of Indian plants, together with his manuscripts and an herbarium of about 1500 species collected in his journey to Nepal, I hasten to communicate some of these rarities to the public. The country of Nepal has never before been explored by any naturalist. Its low latitude, and great differences of elevation, from the plain of Hindustan to mountains covered with perpetual snow, give a peculiar character to its botanical productions, which bear an affinity on the one hand to those of Bengal, and on the other to those of China, Japan and Siberia. The species are in a great measure new, and of these the *Orchideæ* are particularly curious. It is necessary to observe that the country in question is divided into 3 regions; 1st, Lower Nepal, which extends into the plains of Hindustan proper; 2d, Upper Nepal, which is much more elevated, so that the mercury in Dr. Buchannan's barometer never rose to 26 inches during his stay there; and lastly, a still loftier alpine region, bordering on the snowy peaks.

The plant in the annexed plate grows among mosses, on the trunks of trees or on rocks, in Upper Nepal. Its name in the Nawar language, spoken by the subjected original natives of Nepal, is *Caybu swa*.

The root is perennial, consisting of numerous simple fibres. Stem none. Bulbs sessile, at first small and awlshaped, clothed with beautifully veined scales imbricated in 2 ranks. Leaves two from the submit of a bulb, later than the flowers, lanceolate, entire, plaited, ribbed, smooth, each tapering at the base into a footstalk. Flowers from separate bulbs, large, solitary, on shortish terminal nearly upright stalks, each of which bears a lanceolate membranous sheath. Petals lanceolate, acute, recurved, light purple, all nearly equal in length; the 2 innermost narrowest. Lip nearly as long as the petals, rolled up into a funnel-shape, externally purple, its taper base united with the bottom of the style, and a little protuberant, not embraced by the petals; its margin spreading, fringed, white; the inside marked with 5 longitudinal, rough, elevated, yellow lines. The bulb after flowering is much enlarged, and the flower-stalk elongated. Capsule obovate, with 6 furrows and 3 valves.

Epidendrum humile.

July 1.1806. Publish'd by Ja.s Sowerby London.

TAB. 98.

EPIDENDRUM humile.

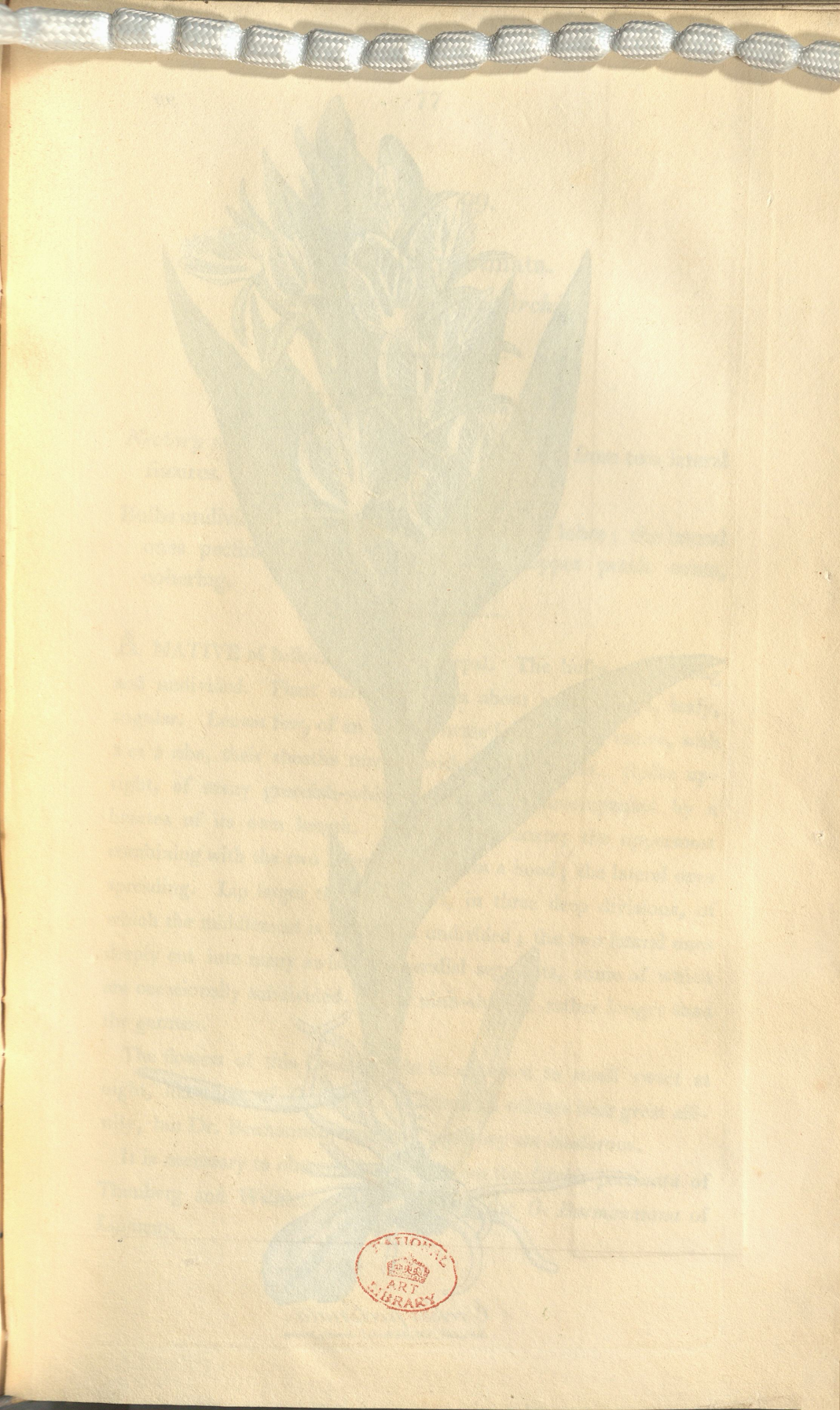
Dwarf Hairy-lipped Epidendrum.

GYNANDRIA Diandria.

Nectary a lip tubular at the base, attached to the fore part of the column, without a spur. *Lid* vertical.

Stalks radical, without leaves, single-flowered, bulbous at their base. Lip of the nectary jagged, hairy, marked with nine elevated lines.

THIS is also an inhabitant of the mossy trunks of trees in Upper Nepal. In habit it closely agrees with the preceding *E. præcox*, but Dr. Buchannan could never observe any leaves. The bulbs should seem by the figure to be only of annual or biennial duration, and at first very small; afterwards they become large and ovate, and after the fruit is perfected they appear to fade and wither. Each flower-stalk bears a concave ribbed sheath about its middle, and three coloured scales at the base. Flowers large, solitary, erect. Petals coriaceous, lanceolate, broadish, pointed, whitish with purple ribs, the 2 lowermost a little dilated on one side at their base. Lip large, convolute, jagged, fringed with hairs, internally yellow, hairy, beautifuly striped and stained with red, and marked with 9 ribs.



Orchis pectinata.

July 1, 1806, Publish'd by Ja.s Sowerby, London.

TAB. 99.

ORCHIS pectinata.

Pectinated White Orchis.

GYNANDRIA Diandria.

Nectary a spur behind the flower. *Antheras* from two lateral fissures.

Bulbs undivided. Lip of the nectary in three lobes; the lateral ones pectinated: spur blunt. Three upper petals ovate, cohering.

A NATIVE of hillocks in Upper Nepal. The bulbs are oblong and undivided. Plant smooth. Stem about a span high, leafy, angular. Leaves few, of an oblong-ovate form, acute, entire, with 3 or 5 ribs, their sheaths marked with 3 acute angles. Spike upright, of many greenish-white flowers, each accompanied by a bractea of its own length. Petals ovate, acute; the uppermost combining with the two inner ones to form a hood; the lateral ones spreading. Lip larger than the petals, in three deep divisions, of which the middlemost is linear and undivided; the two lateral ones deeply cut into many awlshaped parallel segments, some of which are occasionally subdivided. Spur club-shaped, rather longer than the germen.

The flowers of this *Orchis* might be expected to smell sweet at night, like those of *O. bifolia*, to which its colours bear great affinity, but Dr. Buchannan expressly says they are inodorous.

It is necessary to observe that this is not the *Orchis pectinata* of Thunberg and Willdenow, for theirs is the *O. Burmanniana* of Linnæus.

Aug 1.1800. Published by Ja.s Sowerby, London.

TAB. 100.

ORCHIS gigantea.

Gigantic White Orchis.

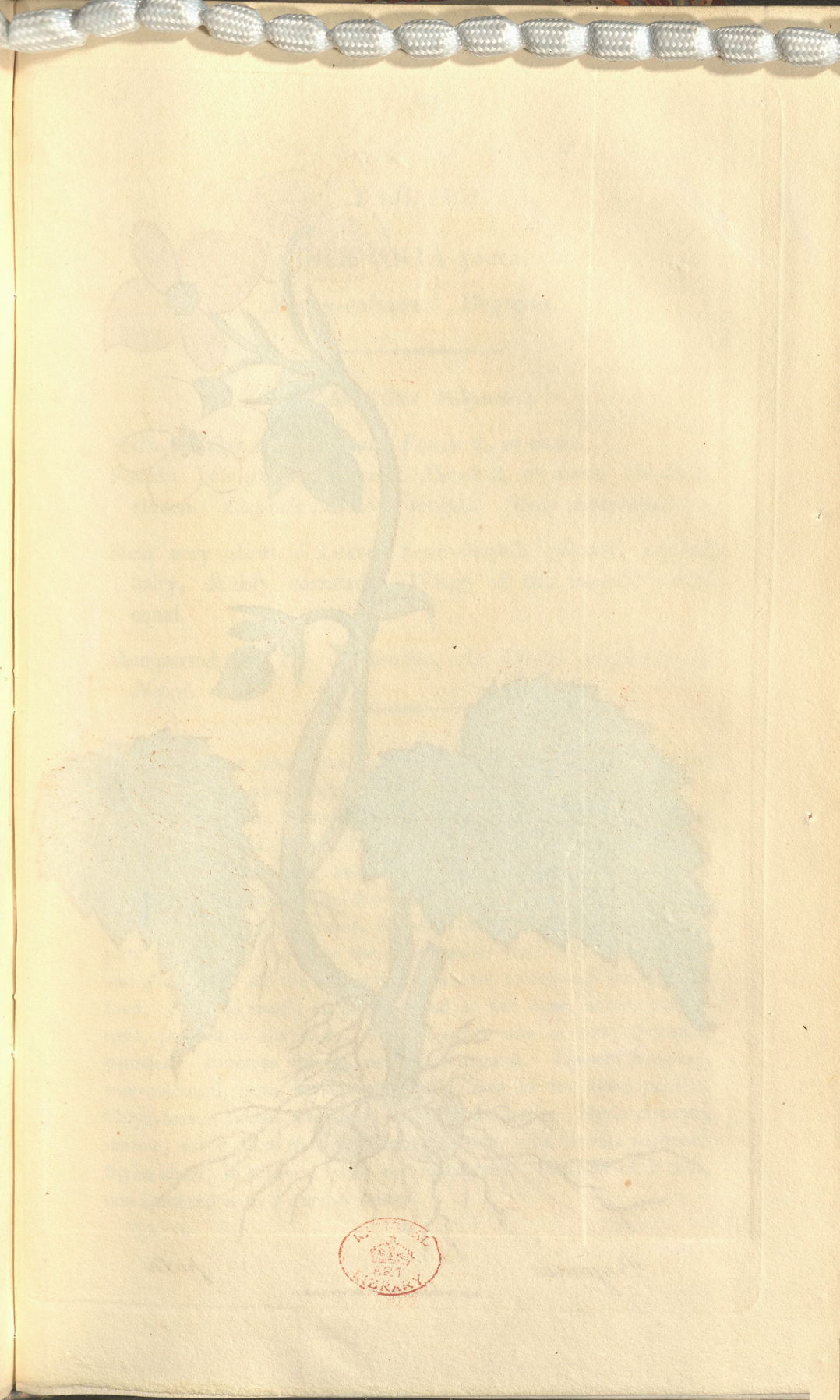
GYNANDRIA Diandria.

Nectary a spur behind the flower. *Antheras* from two lateral fissures.

Bulbs undivided. Lip of the nectary in three lobes; the lateral ones pectinated. Lateral petals sickle-shaped, very narrow, distinct.

FOUND by Dr. Buchannan in the woods of Upper Nepal, and also in the Mysore country, flowering in September.

This *Orchis* is extremely remarkable for the great size of all its parts, in which particular we know of none that approaches it. Some indeed rival the height of its stem, which is about 3 or 4 feet, but no known species has such large flowers. In habit and colour it is nearly akin to *O. pectinata, t. 99,* and to the *O. Susannæ* of Linnæus, but the latter is of a much more pure and brilliant white. The inner petals being very narrow, sickle-shaped, and unconnected with the upper one, afford a good mark of distinction.



Begonia *picta*

Aug.1 1806. Published by Ja.s Sowerby London.

TAB. 101.

BEGONIA picta.

Party-coloured Begonia.

MONOECIA Polyandria.

Male. *Calyx* of 2 leaves. *Petals* 2, or more.

Female. *Calyx* of 2 leaves. *Petals* 2, or more. *Styles* 3, cloven. *Capsule* inferior, winged. *Seeds* numerous.

Stem very short. Leaves heart-shaped, pointed, rugged, hairy, doubly serrated. Wings of the capsule nearly equal.

Mungarcachi *of the Parbutties, the Hindu conquerors of Nepal.*

THIS elegant plant was discovered by Dr. Buchanan growing among mosses, upon rocks in upper Nepal, July 21, 1802.

Root perennial, tuberous, roundish. Whole herb rough with little bristly hairs. Stem herbaceous, an inch or two in length, simple, round, creeping, and throwing out fibrous roots at its joints. Leaves few, on long round footstalks, heartshaped, pointed, veiny, very rugged, doubly serrated, blotched with various colours, most purple beneath; those on the stem smaller than the radical ones, and alternate. All the leaves have an acid taste, and are used as food. Stipulas small, in pairs, broad at the base, acute, permanent, pressed to the stem. Flower-stalks one or two, terminal, panicled. Bracteas oblong, acute, permanent. Flowers drooping, rose-coloured, both barren and fertile ones in the same panicle. Calyx-leaves broad, coloured, hairy at the back. Petals obovate, narrow, rarely more than 2. Stamens short, with obovate antheras. Styles short, in 3 lobes, with curled stigmas. Capsule of 3 cells, and bordered with 3 narrow wings.

The genus of *Begonia* was first well elucidated by Mr. Dryander in the first volume of the Linnæan Society's Transactions, where 21 certain species are defined, and 9 doubtful ones besides enumerated. Our plant is certainly not among them. Botanists have been much puzzled to determine the *Natural Order* of *Begonia*; and the able writer I have just named, after enumerating the opinions of others, assents to that of M. de Jussieu, who declares it to be a genus "not really allied to any other." I should be unjust therefore to conceal a hint communicated by Mr. Salisbury, and which appears to me of great weight, that "*Begonia* is very nearly allied to *Hydrocharis*." This confirms the propriety of considering the outer petals as a calyx, to which Jussieu was inclined, and which is further authorized by the hairiness of that part in the species before us.

Canna glauca.

Aug.1.1806. Published by Jas. Sowerby London.

TAB. 102.

CANNA glauca.

Glaucous Indian-reed.

MONANDRIA Monogynia.

Calyx of 3 leaves. *Inner* segments of the *corolla* 2-lipped, variously divided. *Anthera* simple, fixed to the edge of the filament. *Style* spatulate. *Capsule* of 3 cells. *Seeds* numerous, globose.

Leaves elliptic-lanceolate, glaucous. Outer segments of the corolla erect: upper lip in three ovate straight lobes; lower lanceolate, undivided, recurved.

Canna glauca. *Linn. Sp. Pl.* 1.
C. indica angustifolia, flore luteo. *Riv. Monop. Irr. t.* 113.

FROM the collection of Lady Hume, in whose aquarium at Wormleybury this plant flowers copiously in the middle of summer. Of its native country we are not certain, nor are its synonyms more clearly ascertained. We are sure, from the specimens and descriptions of Linnæus, of its being his *C. glauca*, and consequently the *Cannoides* of his *Hortus Cliffortianus*, the seeds of which, he tells us, came from Africa; but surely the *Cannacorus* of *Dill. Hort. Elth. t.* 59. is more like Mr. Salisbury's *C. flaccida*, a most distinct species. The whole genus wants a thorough investigation. The synonyms of *C. angustifolia*, a very doubtful plant, probably belong to *C. glauca*.

The root of our plant is perennial and creeping, thriving best under water. Stems simple, erect, 6 or 8 feet high, round, leafy,

of a light glaucous green, very smooth. Leaves numerous, alternate, very glaucous, smooth, elliptic-lanceolate, long-pointed, with one rib and innumerable oblique parallel veins; their base running down into a broad sheathing footstalk; their edge membranous, entire. Spike terminal, simple, erect; its common stalk triangular. Bracteas membranous, various in size. Flowers solitary or in pairs, nearly sessile, erect, of an elegant sulphur-colour. Calyx-leaves equal, erect, linear-lanceolate, acute, glaucous. Tube of the corolla scarcely so long as the calyx. Three outer segments of the limb much like the calyx in form, but thrice as long, yellow, always erect, never (as in *C. flaccida*) reflexed: inner segments, still longer, yellow; the 3 uppermost erect, ovate or elliptical, entire, plain, all nearly of a size, embracing with their base the lower segment, which is revolute, linear, undivided. Filament broad, membranous, revolute, bearing the anthera on one edge below the top. Style narrower, thicker and more rigid. Germen obovate, tuberculated, pale green, rather glaucous.

The lower figure shows the germen, calyx, filament, anthera and style, all the segments of the corolla being cut away.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Globba marantina

Aug.1.1806 Published by Jas. Sowerby, London.

TAB. 103.

GLOBBA marantina.

Marantine Globba.

MONANDRIA Monogynia.

Anthera in 2 parts. *Filament* elongated, incurved, bearing a lobed appendage. *Style* thread-shaped, embraced by the *anthera*. *Corolla* with 3 *outer* lobes; and 3 *inner*, the middlemost vertical and cloven.

Appendage of the filament four-lobed, divaricated, terminal. Spike surmounted by the leaves. Bracteas elliptical, broad, longer than the calyx.

Globba marantina. *Linn. Mant.* 2. 170. *Willd. Sp. Pl. v.* 1. 153. *Lamarck. Encycl. v.* 2. 730.
Colebrookia bulbifera. *Donn. Cant.* 1.

NO botanist has yet been able to understand the genus of *Globba*, which Linnæus constructed with rather flimsy materials derived chiefly from Rumphius, from whom he adopted the name, which is of Indian origin. The species before us is the only one that Linnæus professes to have seen, and which is described in his *Mantissa*, and preserved in his Herbarium. His full generic character was, I presume, taken from some of the young unexpanded flowers which have evidently been picked from his specimen. This may account for the only very great errors in his description, which concern the length and number of the filaments. The last circumstance has justly astonished all botanists acquainted with *scitaminean* plants, especially the intelligent Lamarck. As Linnæus ap-

pears to have examined only 1 or 2 unopened flowers, for the full grown ones are so transient as scarcely to be preserved in any form, this accounts for his describing the filaments as only "of a middling length," as in that state they really are. Perhaps, in the operation of moistening and dissecting the flower, the very tender filament might be slit longitudinally, and then one apparent anthera would adhere lengthwise to each segment, exactly according with his description. The stigma moreover, at this stage of growth, does not acquire its full size and figure; hence he calls it acute.

Of this most distinct genus we have, in Sir J. Banks's and Dr. Buchanan's collections, found traces of several species*, differing in the precise situation, as well as in the number, of the lobed, or often crescent-like, appendages to the filament, but all agreeing in the singular form of the lip. It belongs to the Natural Order of true *Scitamineæ*, having the style embraced by the divided anthera, which are therefore justly separated from the *Cannæ* by Mr. Roscoe in an excellent paper lately read before the Linnæan Society, from whence we have learned the only true principle upon which natural genera in this order can be founded, the form of the filament.

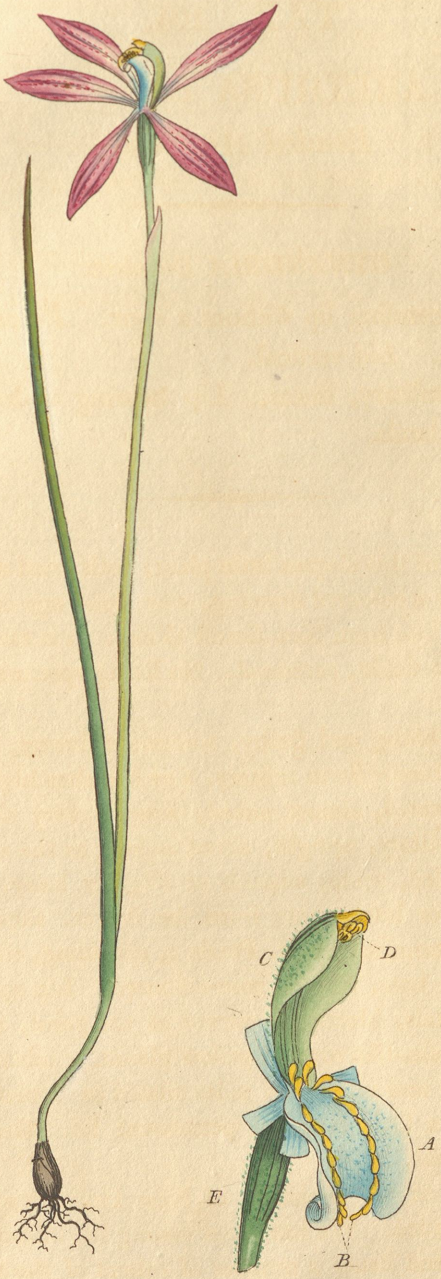
But though we thus ascertain and fix the *Globba* of Linnæus, we are obliged to expunge both his other species, which belong to very different genera. We must also leave unsettled many of the *Globbæ* of Rumphius. Some of them are well-known species of as well-known genera, but others have not come before us in a shape for determination at all. What the *G. japonica* of Thunberg is, we have no means of knowing.

The present *Globba* was sent from Bengal by Dr. Roxburgh, who named it *Colebrookia*, to Lady Hume, in whose stove we have examined and delineated it. It flowers with us in the middle or latter part of summer. The blossoms, however curious, are transient and inconspicuous, and the lower ones are often supplanted

* The *Hura Siamensium*, *Retz. Obs. fasc.* 3. 49. is one of them.

by viviparous granulated bulbs. The root is tuberous and perennial. Stems several, erect, about 2 feet high, simple, leafy. Footstalks long, sheathing, alternate, truncated and bearded at their summit. Leaves elliptical, sharp-pointed, entire, with one rib and numerous oblique, parallel veins; smooth above; soft and finely downy beneath. Spike terminal, erect, simple, more or less lax, shorter than the leaves. Bracteas alternate, one to each flower, sessile, elliptical, broad, concave, many-ribbed, somewhat downy, minutely dotted. Flowers clustered, sessile, erect, 3 or 4 times as long as the bracteas, yellow with shades of orange. Calyx tubular, 3-cleft, crowning the small round germen. Corolla with a long, cylindrical, downy tube; its outer limb in 3 nearly equal, ovate, spreading lobes; inner with 2 nearly similar lobes, and a very peculiar central lip, which is vertical, prominent, cloven at each extremity, and constant in all the species we have seen. Stamen long, linear, channelled, terminating in 4 acute divaricated lobes, making a sort of double crescent, between which stands the 2-lobed anthera. Style threadshaped, as long as the stamen, embraced by the filament and anthera. Stigma obtuse, somewhat concave.

A calyx magnified. B central lobe of the inner limb of the corolla. C stigma. D anthera, surrounded by the appendages of the filament. *e* a viviparous bulb from the lower bracteas, of the natural size.



Arethusa catenata.

Aug.1.1806. Published by Jas. Sowerby London.

TAB. 104.

ARETHUSA catenata.

Beaded Arethusa.

GYNANDRIA Diandria.

Nectary an ascending lip without a spur. *Petals* 5, narrow at their base. *Lid* vertical.

Leaf radical, solitary, linear. Lip bearing a double row of prominent glands.

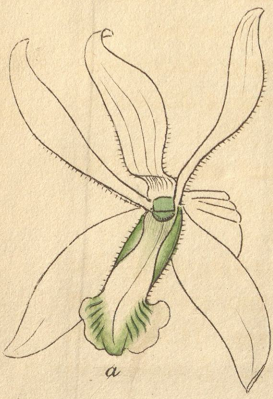
SPECIMENS of this elegant little plant, both dried and in spirits, accompanied by a coloured drawing, were long ago communicated to us by Dr. White from New South Wales. It is said to flower in July, and is, no doubt, perennial. No living specimens have been brought over.

The root is oblong and fleshy, somewhat downy, throwing out fibres from the base. Stem solitary, 5 or 6 inches high, erect, simple, single-flowered, almost naked, round, very slightly hairy. Leaf radical, solitary, upright, about as long as the stem, narrow, linear, channelled, acute, smooth or slightly hairy. Bracteas 1, 2 or 3, more or less remote from the flower, sheathing, ovate, acute. Flower terminal, erect. Petals 5, spreading, elliptical, acute, tapering at the base, ribbed, rose-coloured. Lip upright, half as long as the petals, blueish, recurved at the point, marked in the front with 2 chain-like rows of yellow glandular tubercles. Column greenish, hairy and viscid, its sides dilated or bordered. Anthera covered with a little terminal permanent lid. Germen oblong, downy and viscid.

This is one of the *Orchideæ* of New Holland whose genus is most easily decided. We have seen among the inimitable drawings of Mr. Ferdinand Bauer a number of others of the same tribe, no less remarkable for singularity than beauty. These, as well as the whole Flora of that interesting country, will in due time be illustrated by the accurate pen of Mr. Brown, now Clerk and Librarian

to the Linnæan Society, and we will not anticipate his discoveries, nor execute imperfectly what he has so much better materials for completing. We shall therefore in general decline the publication of New Holland plants for the future, except we should want to elucidate any particular point to which we have given peculiar attention, or any thing that may want explanation from the gardens.

A lip of the flower. B its chain-like glands. C back of the column. D anthera and its lid. E germen.



Neottia acaulis.

Aug.1 1806. Publish'd by Ja.s Sowerby London.

TAB. 105.

NEOTTIA acaulis.

Stemless Neottia.

GYNANDRIA Diandria.

Nectary an ascending lip without a spur, embraced at the bottom by the dilated base of the 2 lower petals. *Lid* parallel to the *style*, and inserted into its back. *Antheras* pointed.

Stem none. Flowers sessile, solitary, in the bosom of each leaf.

FOR this most extraordinary plant, unique in its Natural Order, (as far as we know) in having neither stem nor flowerstalk, we are indebted to the favour of Mr. Evans of Stepney, who received it from Trinidad, and in whose stove we had the pleasure of seeing this and many other very rare productions in June last.

Root perennial, consisting of many thick simple fibres. Leaves numerous, all radical, rather spreading, ovate, acute, waved, ribbed, smooth, variegated with dark and paler green, their surface minutely granulated with beautiful shining particles; the under side of a light uniform green. Flowers radical, solitary in the bosom of each leaf, sessile, erect, greenish, with a sweet musky scent occasionally perceptible. Petals upright, very little spreading, lanceolate, recurved at the point; the outer ones green; the 2 innermost whitish and more delicate, united longitudinally to the dorsal one. Lip rather shorter than the petals, downy, oblong, channelled, green and white, terminating in a blunt point, with 2 dilated lateral lobes. Column shorter than the lip.

This genus separated from *Ophrys* by Jacquin, and confirmed by Swartz, seems to us well defined in habit as well as character.

a lip, of the natural size. B column magnified, showing the double oblong viscid stigma in front, and bearing the lid and antheras on its back. C lid seen in front, showing the 2 antheras. D a portion of the column accidentally attached to the anthera. E section of the top of the germen.


d
f
e
a

Alpinia nutans.

Sept.1.1806 Published by Ja.s Sowerby, London.

TAB. 106.

ALPINIA nutans.

Drooping Alpinia.

MONANDRIA Monogynia.

Anthera 2-lobed, terminal, embracing the *style*, without any appendage. *Inner* limb of the *corolla* a simple lip. *Capsule* fleshy.

Cluster drooping. Lip inflated, crisped. Germen woolly.

Alpinia nutans. *Rosc. Mss.*

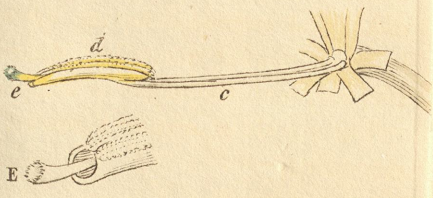
Globba nutans. *Linn. Mant.* 2. 170. *Redout. Liliac. v.* 1. *t.* 60.

G. sylvestris. *Rumph. Amboyn. v.* 6. 140. *t.* 62, 63.

Renealmia nutans. *Andr. Repos. t.* 360. *Donn. Cant.* 1. *Edwards Tab.* 1. *Thornt. Illustr. t.* 13.

Zerumbet speciosum. *Wendl. Sert. Hannov. t.* 19.

WHEN this fine plant first flowered in the stoves about London 11 or 12 years ago, much dispute arose concerning its genus, for indeed scarcely any certain generic characters were known in the order of *Scitamineæ* to which it belongs. On comparing it with the original specimens of Linnæus's *Renealmia exaltata*, I found them to agree precisely in the structure of their flowers, so as to be unquestionably of one genus. Indeed Linnæus has quoted the above figures of Rumphius for his *R. exaltata*, and has taken altogether from them his description of its stem and leaves, not recollecting that in his *Mantissa* he had founded his *Globba nutans* solely on those very figures! The synonym, and the two first paragraphs of the description, of *Renealmia exaltata*, are therefore to be erased from the *Supplementum*, and *Globba nutans* expunged entirely from the system, except as a synonym to the plant now under consideration, which, though of the same genus with the Linnæan *Renealmia*,



Hedychiu

Sept.1.Bot.Pl

Hedychium coronarium.

Sept.1 1806. Published by Jas. Sowerby London.

TAB. 107.

HEDYCHIUM coronarium.

Sweet-scented Garland-flower.

MONANDRIA Monogynia.

Anthera 2-lobed, recurved, terminal, embracing the style, without any appendage. *Outer* limb of the *corolla* in 3 equal linear lobes: *inner* in 3 parts, 2-lipped. *Flower* reversed. *Tube* longer than the limb.

Leaves lanceolate. Bracteas imbricated, elliptical. Lip cloven.

Hedychium coronarium. *Koenig in Retz. Obs. fasc.* 3. 73. *Willd. Sp. Pl. v.* 1. 10. *Curt. Mag. t.* 708. *Lamarck. Encycl. v.* 2. 603.

Gandasulium. *Rumph. Amb. v.* 5. 175. *t.* 69. *f.* 3.

Lutisu Swa *of the Nawars, or original natives of Nepal.*

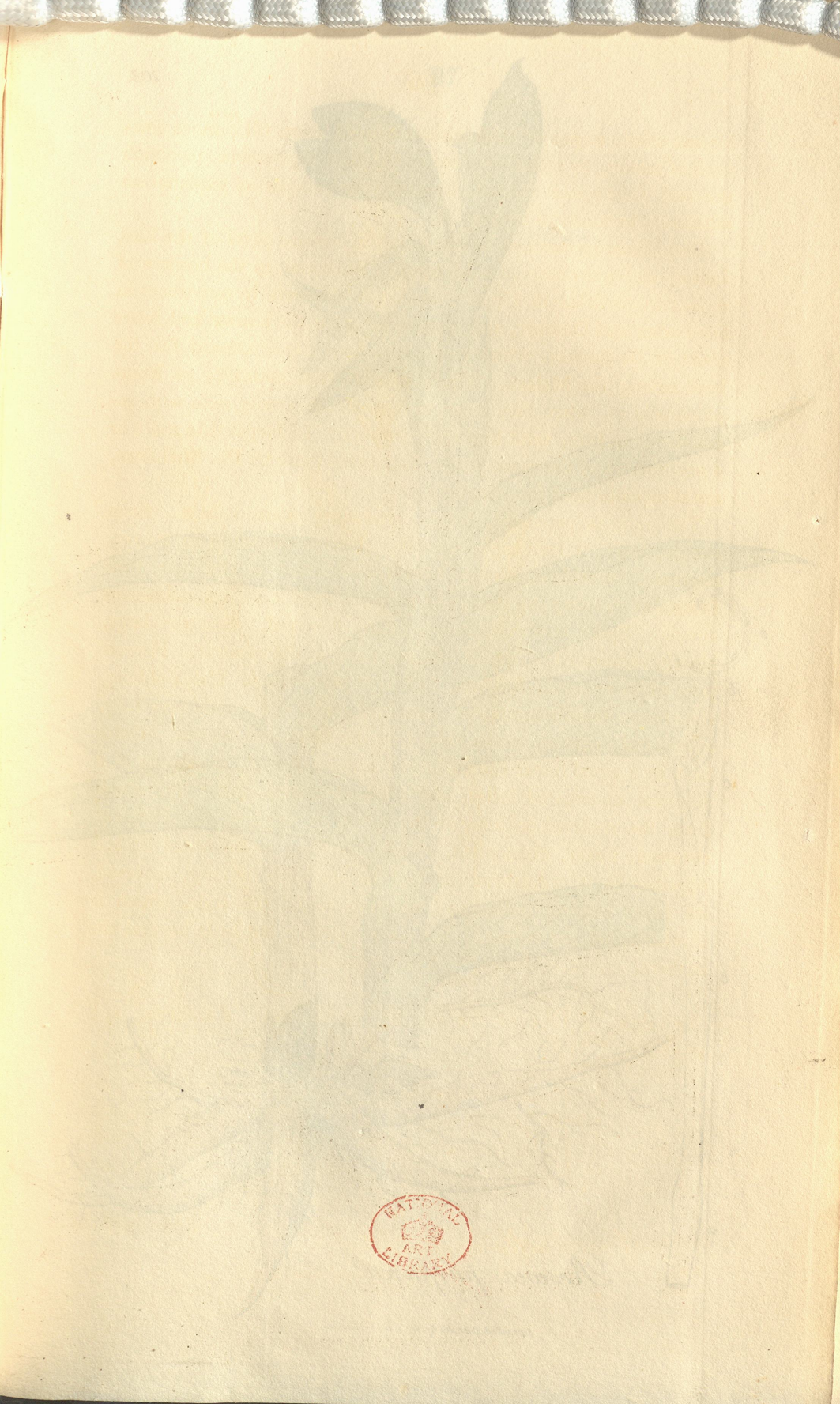
THE *Scitamineæ* are so beautiful, and so interesting both to the learned and unlearned, that we are induced, with regard to them, to swerve from our general rule of not publishing any plant tolerably figured already. This is the more necessary, as their genera have not hitherto been established on any sure principles, nor their parts delineated with a view to any certain mode of arrangement. Their characters in all books are composed from imperfect materials, very vague, and often absolutely false. It can therefore, as the species are not very numerous, be no burthen to the science to delineate from living specimens such as fall in our way, and especially to fix the characters and habit of every genus, according to that system of which Mr. Roscoe has laid the foundations with so masterly a hand. We cannot but regret that the late Professor Vahl was not furnished with materials to illustrate these plants, the pressing want of which, as it should seem, induced that learned botanist, when composing

his last work, to put off the consideration of them till a more convenient season, by referring them to the class *Gynandria*, to which the real *Scitamineæ* cannot, by any construction or explanation whatever, be made to belong.

Hedychium coronarium is cultivated in various parts of the East Indies, and was observed wild by Dr. Buchanan in the borders of mountainous fields in Upper Nepal. It blossoms in our stoves in September and October, and is remarkable for the beauty and sweet scent of its flowers, which render it a favourite ornament for the head among the Malays. The women of that country, as Rumphius tells us, when they mean to reproach a young man with inconstancy in love, send him these flowers. In Nepal this and 3 or 4 new species of the same genus, discovered there by Dr. Buchanan, are all equally used for ornament.

The root is perennial, fleshy, producing many offsets. Stem simple, leafy, 3 feet high, smooth. Leaves spreading in 2 rows, alternate, lanceolate, downy beneath, recurved at the tip; their footstalks clasping the stem, and each crowned with a membranous stipula. Spike terminal, erect, many-flowered. Bracteas large, closely imbricated, elliptical, obtuse, hairy at the summit. Flowers pure white or cream-coloured, in Nepal pale yellow. Calyx oblong, sheathing, membranous, of 1 leaf. Tube of the corolla very long, cylindrical, curved, much exceeding the calyx and bractea. Outer limb in 3 equal linear flaccid lobes: inner 2-lipped, consisting of 2 elliptical divaricated lobes, and a broad cloven under lip, which from the reversed position of the flower is uppermost. Filament reversed, linear, channelled, simple, as long as the broad lip and opposite to it. Anthera attached by its back, oblong, recurved, its edges bearing pollen and meeting round the style, which is threadshaped and strong. Stigma projecting but little beyond the anthera, concave, fringed. Fruit unknown.

a calyx. *b* tube of the corolla. *c* filament. *d* anthera. *e*, E stigma.



Roscoea purpurea.

Sept.1.1806. Published by Ja.s Sowerby, London.

TAB. 108.

ROSCOEA purpurea.

Purple Roscoea.

MONANDRIA Monogynia.

Anthera 2-lobed, incurved, terminal, embracing the style, with a cloven appendage at its base. *Outer* limb of the *corolla* irregular; its *upper* lip vaulted; *lower* deeply divided: *inner* in 3 parts, 2-lipped.

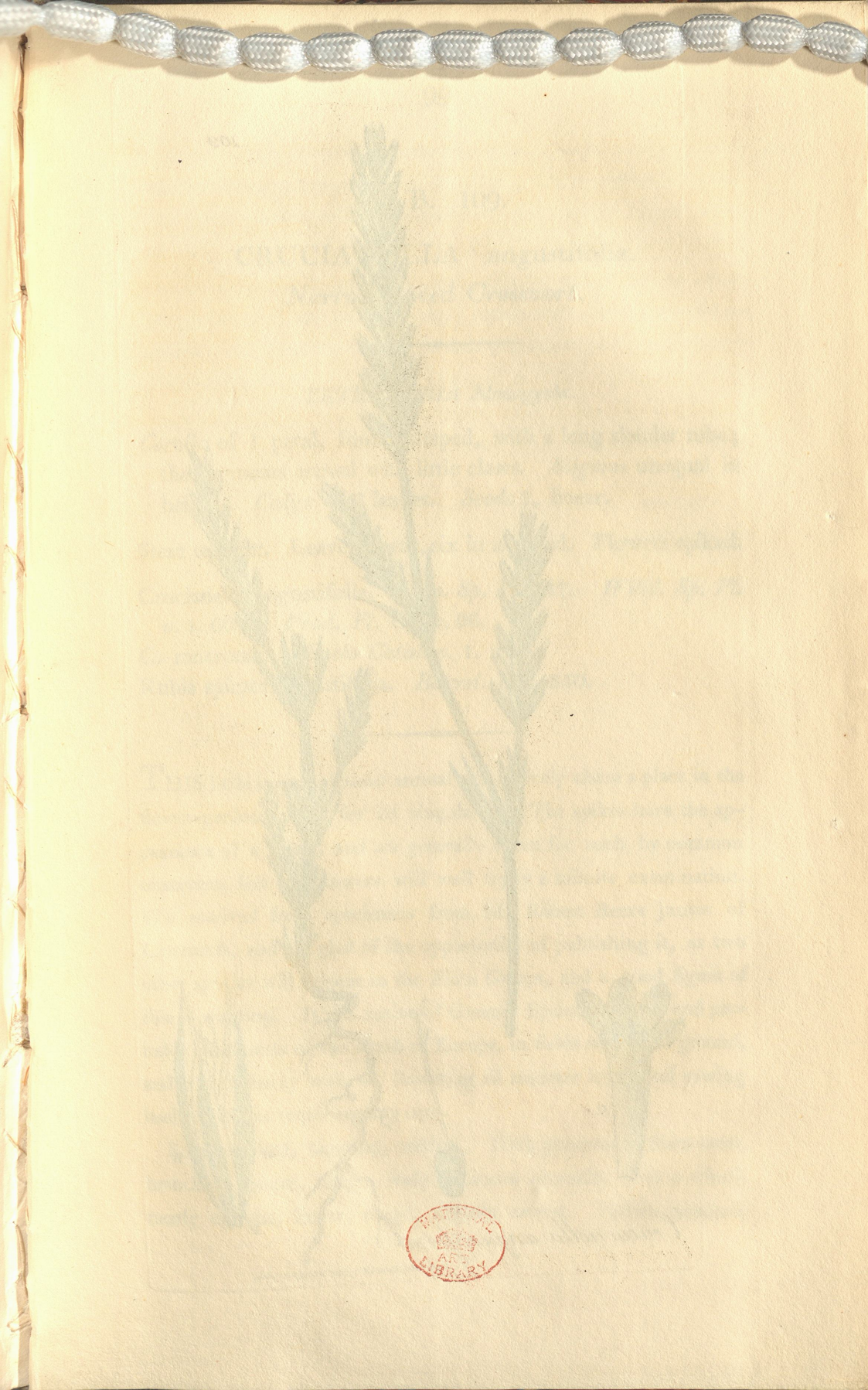
Hatucon Swa *of the Nawars.*

FINDING in Dr. Buchanan's collection a drawing and specimens of this new genus of the order of *Scitamineæ*, I cannot but dedicate it to Mr. Roscoe, whose attention has been so peculiarly devoted to this order, and who has thrown so much light upon it. We are acquainted with but one species of *Roscoea*, a native of the mountains of Upper Nepal. The genus should be arranged near *Hedychium* and *Kæmpferia*, to both of which it has some points of affinity; but the striking characters of the irregular 2-lipped outer limb of the corolla, and the peculiar appendages to the base of the anthera, clearly distinguish it from the whole tribe.

The root is perennial, consisting of several clustered oblong tapering knobs, producing branched fibres. We cannot perceive in it any aromatic or pungent flavour. Stem solitary, erect, a foot or more in height, simple, leafy, compressed. Leaves spreading in 2 ranks, alternate, oblong, pointed, folded, wavy, entire, smooth, with many oblique parallel veins; pale beneath; somewhat heart-shaped at the base, running down into broad, sheathing, compressed, furrowed, purplish footstalks, which embrace and conceal the stem. Stipula crowning the inside of the footstalk, very short, entire. Flowers several, but not opening all at once, terminal, clustered, sessile, erect, large and handsome, their tubes concealed by the sheaths of the upper leaves. Calyx of 1 leaf, tubular,

sheathing, very long, brown, with a membranous edge. Tube of the corolla scarcely longer than the calyx, triangular upwards, straight. Outer limb ringent, 2-lipped; its upper lip erect, broad, concave; lower about as long, in 2 deep, lanceolate, reflexed lobes: inner limb 2-lipped, its upper lip erect, shorter than the outer limb, of 2 cohering half-ovate lobes, tapering at the base, and embracing the organs of fructification; lower much longer and broader, spreading, cloven. Filament short, linear, erect. Anthera long, greatly incurved, linear, bearing pollen in the upper part only, its base extended into 2 lanceolate, horizontal, ascending, acute, membranous, white lobes. Germen inferior, very small. Style thread-shaped, lodged in the groove of the filament, and of the anthera, to whose curvature it conforms. Stigma obtuse, concave, downy, just projecting beyond the anthera.

a germen. *b* calyx. *c* tube of the corolla. *d* filament. *e* anthera. *f* 2-lobed appendage at its base. *g* stigma.



Cruciánella angustifólia

Sept.r 1806. Published by Jas Sowerby London.

TAB. 109.

CRUCIANELLA angustifolia.

Narrow-leaved Crosswort.

TETRANDRIA Monogynia.

Corolla of 1 petal, funnel-shaped, with a long slender tube; the segments armed with little claws. *Stigmas* unequal in height. *Calyx* of 2 leaves. *Seeds* 2, linear.

Stem upright. Leaves linear, six in a whorl. Flowers spiked.

Crucianella angustifolia. *Linn. Sp. Pl.* 157. *Willd. Sp. Pl. v.* 1. 601. *Prod. Fl. Græc.* 96.
C. mucronata. *Roth. Catal. v.* 1. 27.
Rubia spicata angustifolia. *Barrel. Ic. t.* 550.

THIS little inconspicuous annual can scarcely claim a place in the flower-garden except for its singularity. The spikes have the appearance of a grass, and are generally taken for such by common observers, but the flowers will well repay a minute examination. We received fresh specimens from Mr. Robert Reeve junior of Lowestoft, and are glad of the opportunity of publishing it, as two other species will appear in the *Flora Græca*, and a good figure of this is wanting. It is a native of Greece, Spain, France, and probably other parts of the south of Europe, in fields and waste ground, and is quite hardy with us, flowering all summer long, and sowing itself, without requiring any care.

Root crooked, tapering, reddish. Herb glaucous. Stem erect, branched, square, rough, leafy. Leaves generally 6 in a whorl, nearly upright, linear, rough, slightly awned. Spikes terminal,

solitary, erect, square, many-flowered. Flowers spreading in 4 ranks. Bracteas solitary, close to each flower, linear-lanceolate, acute, awned, rough, with membranous white edges. Calyx of 2 leaves, exactly like the bracteas. Corolla rather longer than the calyx, 4-cleft, yellowish green, externally tipped with pale red; its segments elliptical, their points slightly awned and incurved. Antheras tawny, just protruding above the orifice of the tube. Germen oblong, angular. Style as long as the tube, cloven, one lobe rising much above the other, both pointing to one side. Stigmas obtuse, small. Seeds linear, compressed, blackish.

A bractea. B, B calyx. C corolla opened. D germen and style: all magnified.

Stuartia pentagyna.

Sept.1 1806. Publish'd by Jas Sowerby London.

TAB. 110.

STUARTIA pentagyna.

Curled Stuartia.

MONADELPHIA Polyandria.

Calyx in 5 deep segments. *Petals* 5. *Styles* 5, cohering or separate. *Capsule* superior, with 5 cells and 5 valves. *Seeds* 1 or 2 in each cell, smooth.

Flowers axillary, solitary. Petals jagged and curled. Styles separate.

Stuartia pentagyna. *L'Herit. Stirp. v.* 1. 155. *t.* 74. *Willd. Sp. Pl. v.* 3. 840.

Malachodendron ovatum. *Cavan. Diss.* 302. *t.* 158. *f.* 2.

A NATIVE of Virginia, which grows well with us in the open air in a mixture of peat earth and loam, flowering in July, but is very rare. It has long been cultivated at Kew, where the late Mr. Aiton gave me specimens in 1785 from an old full-grown shrub; but in the *Hortus Kewensis* it is not distinguished from *S. Malachodendron.* The latter is known by its combined styles, and entire petals, and is figured by Mr. Andrews, *Repos. t.* 397, under the name of *marilandica*, but the synonym of Cavanilles is there misapplied. L'Heritier has well defined the two species and their synonyms, and, adhering to that golden Linnæan rule, "*genus dabit characterem, non character genus,*" has judiciously kept them together as one genus. He has also properly corrected the orthography of the name. Cavanilles, on the contrary, from the styles being separate in one, and combined in the other, and from the consequent difference in the cohesion of the cells of the fruit, though the whole structure and aspect of the parts indicate the strictest generic affinity, has divided them into 2 genera, and his error has spread widely

among those who would have judged better had they seen the plants. The excellent Jussieu has been induced to place them in 2 different orders of his system, nor does this impeach his skill. All human systems, however natural in theory, must be artificial and incorrect in practice. Thus, though all botanists owe to Linnæus the fundamental principles of natural genera, it would be absurd to expect that he, or any of his followers, should always be infallible in their application.

Our specimen was communicated by the Marquis of Blandford, from his rich and beautiful garden at White Knights, in July last. This very ornamental shrub is commonly 5 or 6 feet high, divided into many alternate, round, smooth, spreading branches. Leaves deciduous, alternate, ovate, pointed, slightly serrated; smooth above; downy and paler beneath, with many prominent veins. Footstalks channelled, bordered, more or less downy, often reddish. Flowers axillary, solitary, large and very showy, cream-coloured or greenish white, often tinged with red, inodorous, on very short stalks. Bracteas 2, lanceolate, downy, permanent, close to the calyx and as long. Calyx in 5 deep, lanceolate, hairy, permanent, spreading segments. Petals 5, occasionally more, rather unequal in size, roundish, concave, slightly cohering at their base, elegantly jagged and crisped at the edge. Stamens numerous, smooth, half as long as the petals, united with them at the bottom into a thick ring. Antheras incumbent, roundish, versatile. Germen ovate, hairy, 5-lobed. Styles quite distinct, a little spreading, smooth. Stigmas recurved, glandular.

a petal. *b* base of the stamens, showing the insertion of the petals. C germen and styles a little magnified.

Amomum grandiflorum.

Nov.r 1.1806. Publish'd by Ja.s Sowerby London.

TAB. 111.

AMOMUM grandiflorum.

Large-flowered Cardamom.

MONANDRIA Monogynia.

Anthera in 2 parts. *Filament* extended beyond the *anthera*; 3-lobed at the summit; 2-lobed at the base.

Stalk simple. Bracteas numerous. Central lobe of the filament undivided. Leaves distant, elliptic-lanceolate, pointed.

A GROWING specimen of this *Amomum* was long ago communicated to Mr. Sowerby by T. F. Forster, Esq. The seeds were gathered at Sierra Leone by the celebrated Professor Afzelius, from whom we have been favoured with dried specimens, marked "*Amomum No.* 3," which, as far as we can discover, are the very same species.

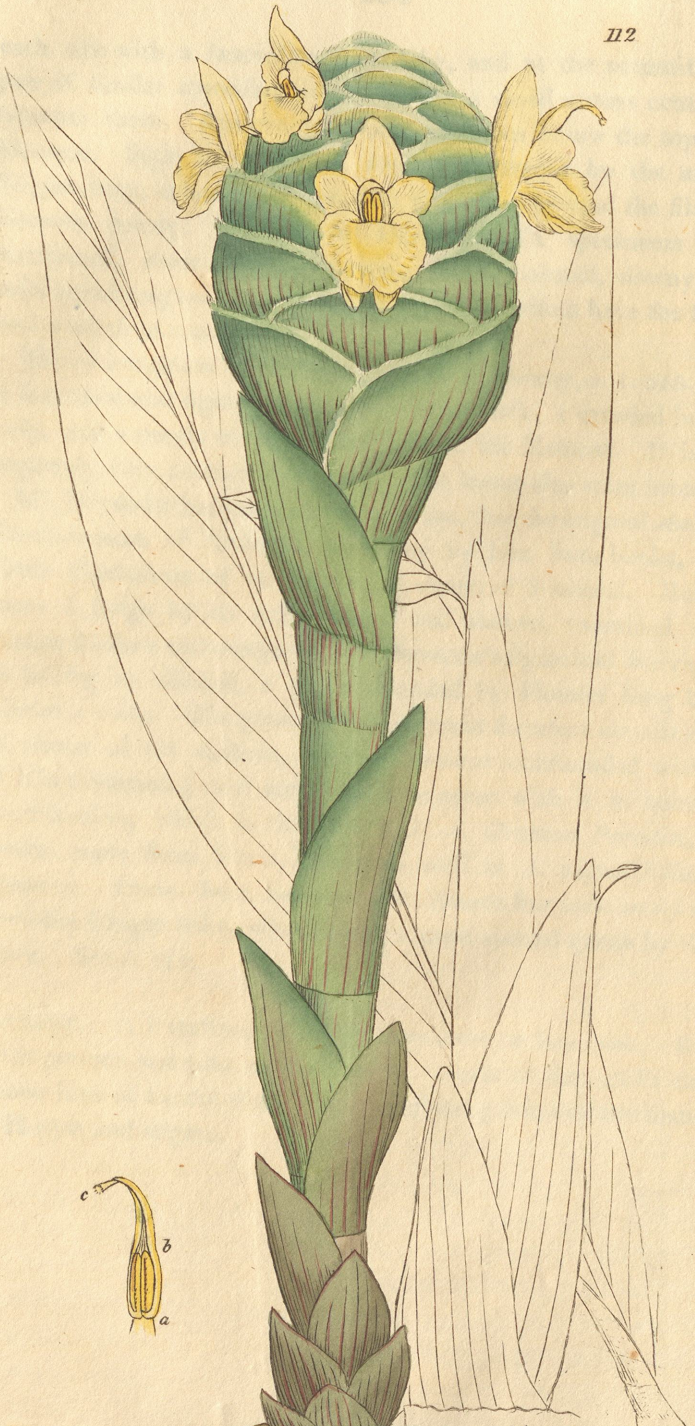
The root is perennial, creeping, woody. Barren stems about 3 feet high, erect, straight, simple, leafy, round, smooth, very slender. Leaves several, alternate, rather remote, spreading, recurved, elliptic-lanceolate, long-pointed, entire, waved, deep green, often tinged with red, very smooth, paler beneath, contracted at the base above the stipula. Footstalks sheathing, very long, narrow, ribbed, polished, each crowned with a cloven rounded stipula. Flowerstalks radical, erect, 2 inches high, striated, downy, clothed with numerous, imbricated, elliptical, concave, smooth, many-ribbed bracteas, of which the uppermost are gradually the largest and most membranous. Flowers clustered, large and handsome, highly aromatic when dried and moistened again. Calyx of 1 leaf, bursting laterally, reddish, downy. Tube of the corolla cylindrical, somewhat downy. Three outer segments of the limb equal, lanceolate, upright, reddish: inner a large, rounded, undulated, somewhat crenate, white lip, yellow at the base. Filament white, scarcely half so long as the lip, oblong, furnished at the base on

each side with a lanceolate acute lobe, and at the summit with a pair of similar spreading lobes, having a small obtuse central one between them. Anthera in 2 separate lobes below the top of the filament. Style threadshaped, downy, embraced by the anthera. Stigma large, concave, fringed, just projecting beyond the filament. Germen downy. Capsule (in Dr. Afzelius's specimens above mentioned) ovate-oblong, brown, ribbed, pointed, downy, of 3 cells containing many greyish shining seeds, which have the flavour and warmth of camphor.

The *A. exscapum* of Dr. Sims, *Annals of Botany*, *v.* 1. 548. *t.* 13, is described and figured with a very short stalk, 2 external bracteas only, and a deeply cloven central lobe of the filament. It is consequently very distinct from ours. The leaves also seem broader.

Mr. Dryander has justly observed to me, that the original *Amomum Cardamomum* of Linnæus, taken up by him from books, is the Little Cardamom of our shops, *A. repens* of Sonnerat. But that plant I judge by its inflorescence and stamen, examined at Sir Joseph Banks's and compared with Sonnerat's figure and description, to belong to *Alpinia*, a genus founded by Plumier long before Linnæus wrote. The genus *Amomum* must therefore consist of the *A. verum* of old authors, (which Linnæus confounded with his *A. Cardamomum*,) and such others as agree with it in habit and fructification, which is the case with *A. Granum Paradisi*, and several more from Sierra Leone, as well as *A. angustifolium* of Sonnerat. From these however Mr. Roscoe has judiciously separated the Ginger tribe, which make a most natural genus by themselves. See *t.* 112.

a calyx. *b*, *b* sections of the germen more or less ripe. *B* part of the germen and tube of the corolla. *c* tube of the corolla entire. *d* outer limb of the corolla. *e* lip. *f*, *f* and *g* lobes of the filament. *h*, H style and stigma.



Nov.1.1806. Published by Ja.s Sowerby London.

Zingiber Zerumbet.

TAB. 112.

ZINGIBER Zerumbet.

Broad-leaved Ginger.

MONANDRIA Monogynia.

Anthera in 2 parts. *Filament* extended beyond the *anthera*, awlshaped, grooved, undivided, embracing the *style*.

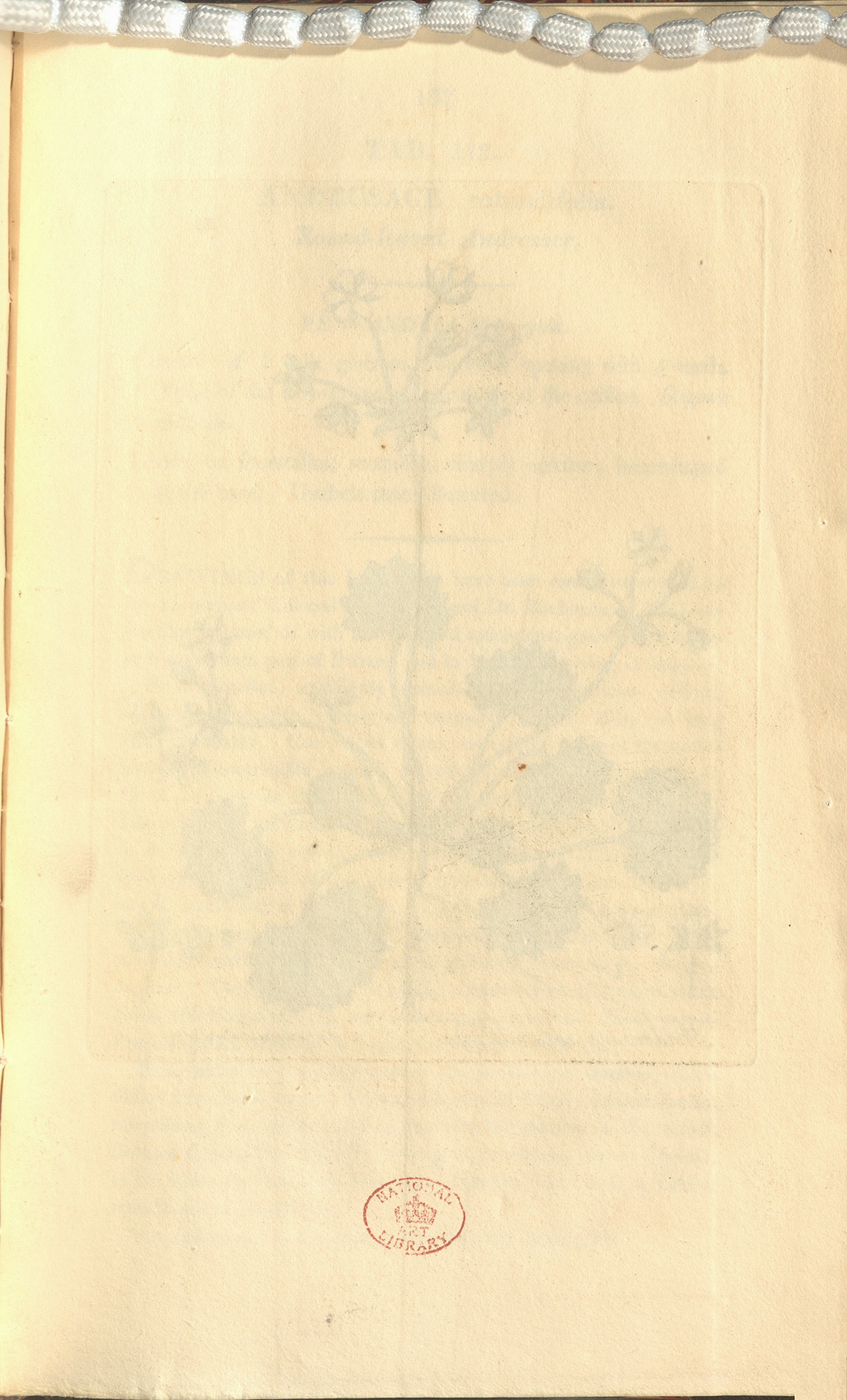
Bracteas ovate, obtuse. Outer segments of the corolla straight. Centre of the lip cloven.

Zingiber Zerumbet. *Rosc. Mss.*
Z. spurium. *Koenig in Retz. Obs. fasc.* 3. 60.
Z. latifolium sylvestre. *Herm. Lugd. Bat.* 636. *t.* 637.
Amomum Zerumbet. *Linn. Sp. Pl.* 1. *Ait. H. Kew. v.* 1. 2. *Jacq. Hort. Vind. v.* 3. 30. *t.* 54.

FROM the collection of Lady Hume. It is a native of the East Indies, not uncommon in our stoves, where it flowers at various seasons.

Root perennial, creeping, fleshy, deficient in the flavour and pungency of the true Ginger. Barren stems 4 or 5 feet high, simple, straight, leafy. Leaves elliptic-lanceolate, spreading; when young silky beneath; their long sheathing footstalks each crowned with an oblong entire stipula. Flowerstalks radical, a foot high, scaly, simple, thick and strong. Bracteas very broad, obtuse, downy-edged, closely imbricated, forming an oval head or spike. Flowers solitary from each bractea, pale yellow, inodorous, each lasting but a few hours. Calyx oblong, membranous, bursting laterally. Tube of the corolla a little longer than the bractea. Outer limb in 3 straight, lanceolate lobes: inner a large spreading 3-lobed lip, of which the middle segment is waved, crenate, cloven at the extremity. Filament terminating above the anthera in an awlshaped incurved appendage, embracing the style, which well marks the genus. Stigma small, fringed.

a 2-lobes of the anthera. *b* appendage of the filament. *c* stigma.



Androsace rotundifolia.

Nov. 1 1806. Published by Jas. Sowerby, London.

TAB. 113.

ANDROSACE rotundifolia.

Round-leaved Androsace.

PENTANDRIA Monogynia.

Capsule of 1 cell, globose, superior, opening with *5* teeth. Tube of the *corolla* ovate, glandular at the orifice. *Stigma* globose.

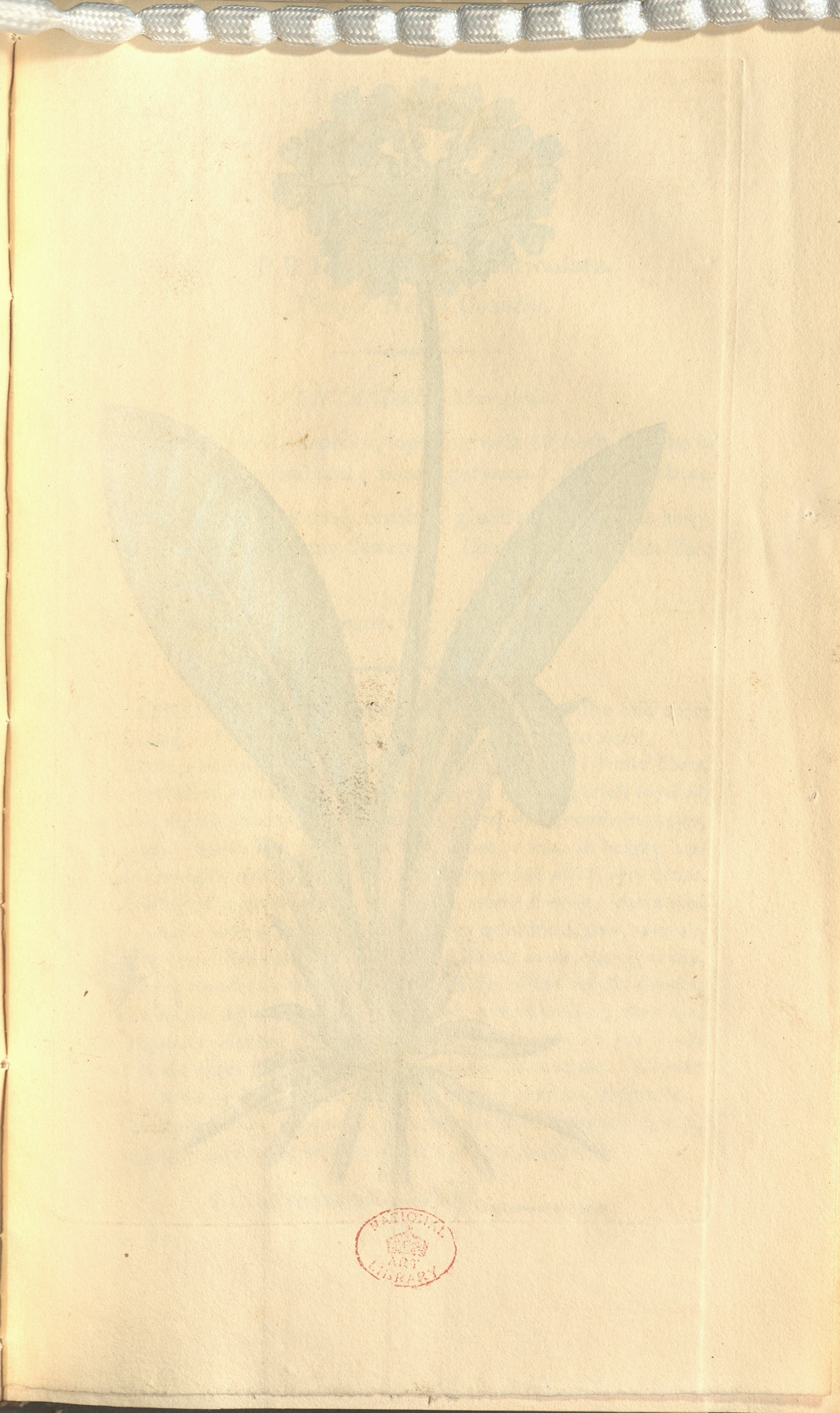
Leaves on footstalks, roundish, sharply crenate; heartshaped at the base. Umbels many-flowered.

DRAWINGS of this little plant have been communicated to us by Lieutenant Colonel Hardwicke and Dr. Buchanan. The latter has also favoured us with several dried specimens, gathered on banks in the northern part of Baharee and in Nepal, flowering in January.

Root branched, apparently annual. Leaves numerous, radical, spreading, roundish, sharply and unequally crenate, hairy, on long hairy footstalks. Cotyledons entire, as well as some of the earlier leaves. Flowerstalks several, ascending, slender, hairy, twice or thrice as long as the leaves, each bearing a loose hairy umbel of many flowers, accompanied by several short ovate bracteas. Calyx in 5 deep, ovate, entire, ribbed, hairy divisions, enlarged as the fruit ripens. Tube of the corolla globose, shorter than the calyx, much contracted at the mouth. Limb concave, white or reddish, in 5 deep obtuse lobes, scarcely extending beyond the calyx. Stamens enclosed in the tube. Germen globose. Style short. Stigma capitate. Capsule globose, whitish, somewhat membranous at the sides, splitting at the top into 5 cartilaginous valves. Seeds numerous, angular, attached to a globular central receptacle.

This plant is very nearly related to the rare *Cortusa Gmelini*, which differs from it in having kidney-shaped and bluntly crenate leaves, resembling those of *Sibthorpia*, and very few flowers in the umbel. Both of them unquestionably belong to *Androsace*, not to *Cortusa*, as Dr. Buchanan has well observed. Gærtner has made a similar remark in his 1st vol. 232.

The dissections in our plate are sufficiently intelligible.



ublishd by Jas. Sowerby London. Primula denticulata.

TAB. 114.

PRIMULA denticulata.

Purple Nepal Cowslip.

PENTANDRIA Monogynia.

Capsule of 1 cell, superior, opening with 10 teeth. Tube of the *corolla* cylindrical; mouth pervious. *Stigma* globose.

Leaves minutely toothed, revolute, glutinous, somewhat hairy. Umbel dense, many-flowered. Limb of the corolla flat; its lobes cloven.

Neckabu swa *of the Nawars.*

GATHERED by Dr. Buchanan, in moist parts of the hills about Chitlong in Upper Nepal, flowering from February to April.

Root perennial, of many long, thick, cylindrical, white fibres. Leaves radical, numerous, obovate, bluntish, revolute, finely toothed, viscid, slightly downy; paler, and reticulated with prominent veins, beneath. Stalks one or two, a foot, more or less, in height, upright, straight, naked, smooth. Umbel terminal, erect, very dense, consisting of a great number of almost sessile flowers, intermixed with small, narrow, acute bracteas. Calyx cylindrical, pale, smooth, divided more than half way down into 5 linear, acute, lax segments, becoming broader as the fruit ripens. Tube of the corolla slender, rather longer than the calyx. Limb flat, purple with a yellow eye, its segments cloven, pale at the base. Stamens 5, in the lower part of the tube. Stigma globose, included in the tube. Capsule oval. Seeds several, small, fixed to a central globular receptacle.

The teeth of the capsule in this species are commonly but 5, though they often split so as to make a greater number.

a ripe capsule. *b* seed.

Colebrookea oppositifolia.

Oct.r 1.1806. Published by Ja.s Sowerby, London.

TAB. 115.

COLEBROOKEA oppositifolia.

Opposite-leaved Colebrookea.

DIDYNAMIA Gymnospermia.

Calyx with *5* teeth, at length becoming *5* feathery awns. *Seed* solitary, bristly. Limb of the *corolla* 5-lobed; 1 lobe larger than the rest.

Leaves opposite.

Sussudia swa *of the Nawars.*
Bhuria Baat *of the Hindus.*

HAVING been obliged to reduce the original *Colebrookea* to the older genus of *Globba*, see *tab.* 103, we are induced by the recommendation of Dr. Roxburgh, strongly seconded by Dr. Buchanan, to apply the same name to this new genus, in honour of Henry Thomas Colebrooke Esq., Chief Judge of the Supreme Civil and Criminal Courts for the natives of Bengal; a gentleman eminent for general literature, and especially for the pains he has taken respecting the history of the plants of that country.

This shrub was gathered about villages and by road sides in Nepal, in 1802, by Dr. Buchanan, who collected specimens of what he esteems a distinct species, the leaves of which are ternate, in the Mysore country. The genus belongs to the 2d section of the *Vitices* in Jussieu, and must be placed at the end of Linnæus's *Didynamia Gymnospermia*, along with *Selago* rightly removed to that order by Schreber. The feathery teeth of the calyx when in fruit form the striking essential character of *Colebrookea*, and the single seed is almost peculiar to it.

Stem shrubby, solid, upright, branched, leafy, downy, with 4 obtuse angles. Leaves slightly aromatic, on downy footstalks, op-

posite, elliptic-lanceolate, pointed, bluntly serrated, finely rugose and downy, furnished with one rib and many parallel veins, without stipulas; entire at the base. Flowers small, white, in numerous, terminal, opposite, long, whorled, downy spikes, each whorl consisting of 10 or 12 flowers, accompanied by several awl-shaped permanent bracteas. Calyx downy, bell-shaped, irregular, with 5 small teeth, which, as the fruit ripens, are lengthened out into very long feathery awns, forming wings to the seed, which is small, obovate, bristly, concealed in the bottom of the calyx, and certainly (unless Dr. Buchanan and myself are greatly mistaken) solitary. The corolla has a slender tube, not much exceeding the calyx in length, and a spreading limb, divided into 5 roundish segments, of which the lowermost is considerably the largest. Stamens distant, above twice as long as the corolla, the 2 uppermost shortest. Antheras small. Germen extremely minute. Style slender. Stigmas 2, acute. This plant flowers in January, and ripens seed in March.

A whole flower magnified. B back of the same. c, C calyx of the fruit. D seed.

Leucosceptrum canum.

Jan.1 1808. Publish'd by Jas. Sowerby London.

TAB. 116.

LEUCOSCEPTRUM canum.

Hoary Leucosceptrum.

DIDYNAMIA Gymnospermia.

Corolla unequal, in 4 segments; the uppermost deeply cloven. *Calyx* 5-cleft. *Stamens* declining, much longer than the corolla, parallel. *Seeds* 4.

Mutsola *of the Nawars.*

THIS shrub was found by Dr. Buchanan in the woods of Upper Nepal, where it is called by the Nawars *Mutsola*, and flowers in the middle of December. It has the habit of a *Buddleia*, but belongs to the 2d section of *Vitices* in Jussieu, near *Verbena;* and should, along with *Verbena*, stand near *Mentha* in the Linnæan system. We know but one species of this new genus.

The branches are obtusely quadrangular, compressed, clothed with fine dense whitish pubescence. Leaves on shortish downy footstalks, opposite, elliptical, pointed and tapering at both ends, bluntly serrated, veiny; green and naked above; white and downy beneath. Stipulas none. Spike terminal, solitary, sessile, erect, cylindrical, dense, many-flowered, shorter than the leaves. Bracteas small, arranged in 4 rows, opposite, each common to many flowers, which are almost sessile, and white. Calyx tubular, downy; its margin obtuse, unequally 5-cleft. Corolla longer than the calyx, with a short tube; the limb in 4, very unequal, obtuse segments, of which the uppermost is deeply divided; the lowermost, or lip, large, concave and entire. Stamens declining, parallel, thread-shaped, smooth; the 2 longest twice as long as the lip. Antheras roundish, 2-lobed, yellowish. Germen superior, 4-lobed. Style declining, as long as the longer stamens, with a cloven acute stigma. Seeds 4, truncated, naked, in the bottom of the calyx.

A, A calyx. B, B lower segment, or lip, of the corolla. C stamens a little disturbed from their natural position, owing to the corolla being cut and opened. D germen, style and stigma. All the parts are more or less magnified, though slightly.

Globba racemosa.

Jan. 1. 1808. Publish'd by Jaˢ. Sowerby London.

TAB. 117.

GLOBBA racemosa.

Long-clustered Globba.

MONANDRIA Monogynia.

Anthera in 2 parts. *Filament* elongated, incurved, bearing a lobed appendage. *Style* thread-shaped, embraced by the *anthera*. *Corolla* with 3 *outer* lobes; and 3 *inner*, the middlemost vertical and cloven.

Appendage of the filament arrow-shaped, narrower than the anthera. Cluster elongated, cylindrical. Bracteas shorter than the calyx, deciduous.

GATHERED by Dr. Buchanan in woods at Suembu in Upper Nepal, June 28, 1802, where it is called in the Parbutty language *Deosara*.

The stem is 3 feet high, erect, simple, closely invested with several long sheathing alternate footstalks. Leaves oblong-ovate, entire, taper-pointed, slightly downy on both sides, the veins especially hairy on the upper. Stipula short, roundish, cloven, crowning the footstalk on the inside, between a pair of auricles which rise above the insertion of the leaf. Cluster terminal, erect, longer than the leaves, cylindrical, many-flowered, smooth. Flowerstalks alternate, horizontal, shorter than the flowers, swelling upwards. Bracteas one at the base of each flower-stalk, oblong, obtuse, deciduous; a smaller bractea accompanies each flower. Flowers 3 at the end of each stalk, not quite on a level, yellow with shades of orange. Calyx tubular, swelling upwards, smooth, greenish dotted with red. Corolla with a downy tube, its segments and lip much like *G. marantina*, *t.* 103. The appendage to the filament, at the back of the anthera, is however remarkably different, being arrow-shaped, and not extending beyond the anthera in any part, except at its rounded termination.

The only remaining species of this genus of which we have any information is the *Hura Siamensium* of Koenig, *Retz. Obs. fasc.* 3. 49, to be ascertained only from the description there published, and a sketch by the late Mr. Parkinson in the possession of Sir Joseph Banks, made under his inspection during his voyage, of which he has favoured me with a copy. From these materials, having never seen a specimen, I venture to offer a character of the plant by the name of

GLOBBA versicolor.

Party-coloured Globba.

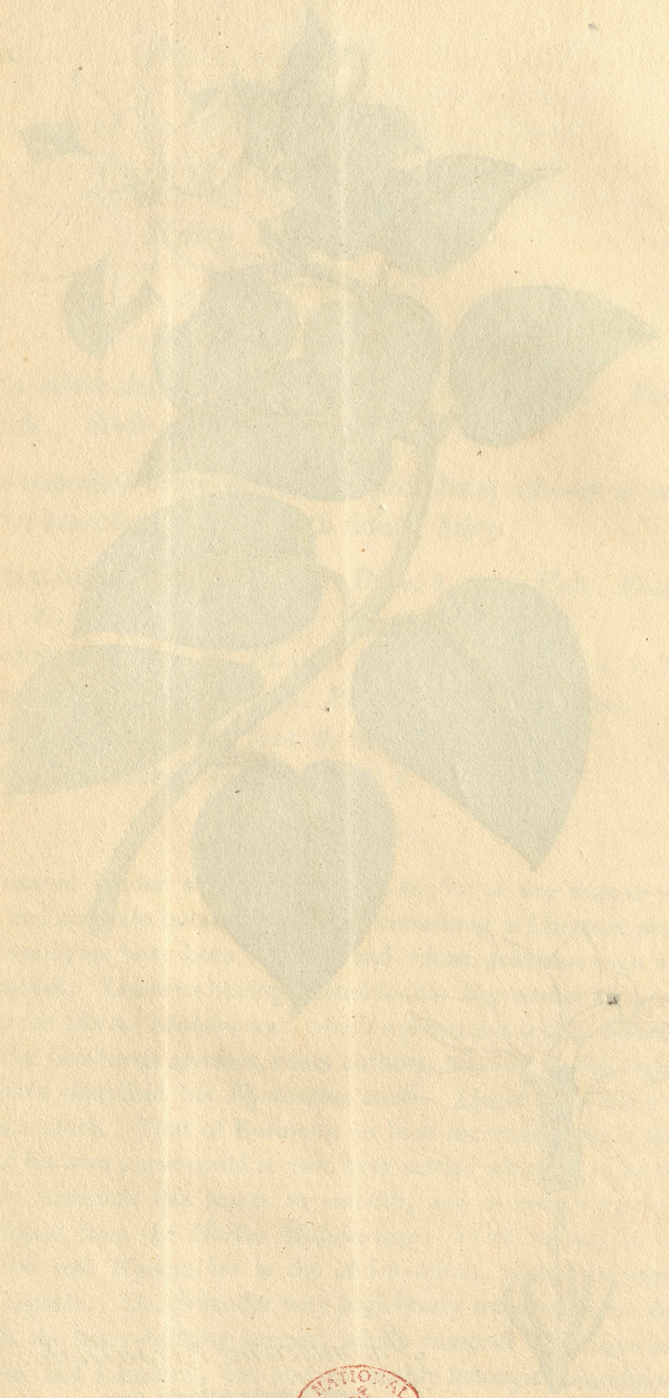
Appendage of the filament four-lobed, divaricated. Cluster somewhat corymbose. Bracteas shorter than the calyx. Lip towards the middle of the filament.

THIS, according to Koenig, grows plentifully in grassy shady places in the island called Young Ceylon, and, in a more dwarf state, near the town of Malacca, in the East Indies. It seems to have a shorter more corymbose cluster of flowers than *G. racemosa*, and the corolla is variegated with orange, white, and different shades of violet. The appendage to the filament appears much like that of *G. marantina;* but the great peculiarity of the present species consists in the situation of the lip, which is elevated far above the other lobes of the corolla, half way up the filament.

An outline of one of these flowers is added to *t.* 117.

a segments of the corolla of *G. versicolor*. *b* lip. *c* anthera with its 4-lobed appendage.

D calyx of *G. racemosa*, twice its natural size. E tube of the corolla. F lip. G stamen and style. H anthera, with its appendage, and the stigma, more magnified.



Jasminum hirsutum.

Dec.1 1806. Published by Jas Sowerby, London.

TAB. 118.

JASMINUM hirsutum.

Hairy Indian Jasmine.

DIANDRIA Monogynia.

Corolla salver-shaped, with from 5 to 10 segments. *Berry* double. *Seeds* solitary.

Leaves opposite, ovate or heartshaped, hairy all over as well as the branches. Calyx-teeth linear, hairy.

Jasminum hirsutum. *Willd. Sp. Pl. v.* 1. 36. *Vahl. Enum. v.* 1. 30.
J. pubescens. *Willd. Sp. Pl. v.* 1. 37. *Vahl. Enum. v.* 1. 26.
Nyctanthes hirsuta. *Linn. Sp. Pl.* 8. *Osb. Resa*, 205.
N. pubescens. *Retz. Obs. fasc.* 5. 9.
N. multiflora. *Burm. Ind.* 5. *t.* 3. *f.* 1.

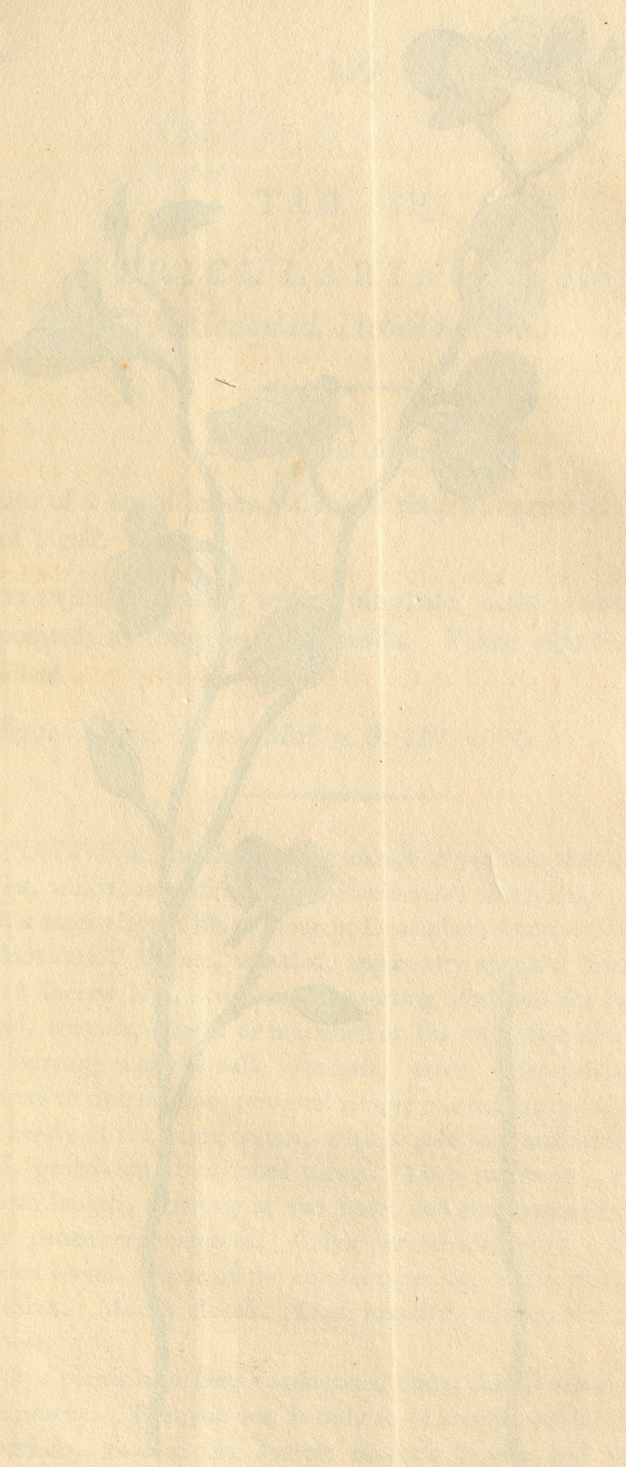
WE cannot render a more acceptable service at any time to the curious and accurate botanist than by ascertaining a Linnæan plant whose synonyms have been obscure, and whose existence even has been doubted. Linnæus having quoted for his *Nyctanthes hirsuta* a figure in the *Hortus Malabaricus*, which represents a totally different shrub, the *Guettarda speciosa*, other authors, trusting to that figure alone, have described his *Nyctanthes* anew. Hence the variety of synonyms above. That of Burmann we have ascertained by a specimen of his own; nor could it have been settled without, as he erroneously describes the leaves as smooth, and moreover quotes a wrong figure from the *Hortus Malabaricus*. With respect to its genus, the real *Nyctanthes* is the *Arbor-tristis*, with a dry compressed capsule. Dr. Solander very judiciously removed from that genus all the berry-bearing species, which compose the *Mogorium* of Jussieu and Lamarck, but unquestionably belong to *Jasminum*,

having only a few more segments in the corolla than the common kinds; a circumstance that varies perpetually.

This *Jasminum hirsutum* is quite new to the gardens of Europe. It grows wild in China and the East Indies, and was sent by Dr. Roxburgh to Lady Amelia Hume. It is cultivated in the stove, flowering in August.

The branches, stalks, leaves and calyx are clothed with fine short hairs. The stem is woody, weak and climbing. Leaves opposite, on shortish footstalks, simple, ovate, entire, more or less heart-shaped at the base. Flowers in short, terminal, forked panicles, large, white, fragrant. Calyx-teeth about as long as the tube of the corolla, linear, narrow, obtuse. Limb of the corolla in 8, or more, ovate, imbricated, often jagged lobes. Anthers in the lower part of the tube, almost sessile.

a calyx and style. *b* teeth. *c* flower opened to show the stamens.



Utricularia reticulata.

Jan.y 1808. Published by Jas. Sowerby London.

TAB. 119.

UTRICULARIA reticulata.

Reticulated Hooded-milfoil.

DIANDRIA Monogynia.

Calyx of 2 equal leaves. *Corolla* ringent, spurred. *Capsule* of 1 cell.

Stem twining, bearing several alternate, acute scales. Calyx pointed, as long as the corolla. Palate reticulated, two-lobed.

Nelipu. *Rheed. Hort. Mal. v.* 9. 137. *t.* 70.

A NATIVE of inundated rice grounds in various parts of the East Indies, which, according to Dr. Buchanan's observations, it clothes with a most elegant blue colour in December, when it flowers.

Root small, fibrous, whorled, apparently annual. Stem from 9 to 12 inches high, twining, supporting itself on the rice stems, round, smooth, simple or branched at the top, destitute of leaves, but bearing many small, alternate, acute, close-pressed scales. Flowers in one or more terminal simple clusters, the size of violets, and nearly of the same colour, with a pale blue and white, reticulated, prominent, two-lobed palate. Each stands on a stalk about its own length, tapering at the base, and accompanied by 3 small scaly permanent bracteas. Calyx permanent, of 2 ovate sharp-pointed leaves. Spur of the corolla tapering, white, full as long as the calyx. Mouth closed. Lips rounded, entire; the uppermost shortest.

Three plants have been confounded under the *Utricularia cærulea* of Linnæus. The true one is only to be ascertained by Hermann's herbarium, now in Sir Joseph Banks's hands, and this is di-

stinguished by its short dense spike, and orbicular calyx-leaves. The synonym of our *U. reticulata* in the *Hortus Malabaricus* was erroneously applied to it by Linnæus, who received a third species from Kœnig, which, having forgot Hermann's plant, he laid into his herbarium as the *cærulea*. This of Kœnig is what Vahl seems to have had, though each of his synonyms belongs to a different species, and his specific difference, applied to the *cærulea*, is erroneous. Dr. Buchanan observed Kœnig's and Vahl's plant about the dried margins of ponds in the Mysore country, flowering in April, and named it *parviflora*. It differs from *cærulea* in its remote flowers and pointed calyx, and from our *reticulata* in having an undivided palate, and much fewer scales on the stem, besides being smaller in all its parts.

Seseli gummiferum.

Jan.ʸ 1.1807. Published by Jaˢ. Sowerby London.

TAB. 120.

SESELI gummiferum.

Gummy Meadow-saxifrage.

PENTANDRIA Digynia.

General Involucrum of 1 or 2 leaves. *Umbels* globose, rather rigid. *Flowers* regular, all fertile. *Fruit* ovate, striated.

Partial involucrum of many linear leaves, united by a broad base. Florets almost sessile. Stem leafy. Leaflets wedge-shaped.

THIS majestic and striking umbelliferous plant was discovered by Pallas in the Crimea, and is frequently mentioned in his Travels in that country, by the above name, but without any description. It seems not yet to have found its way into any systematic work. Mr. Lambert observed it 3 years ago in the Oxford garden, and ascertained it by Pallas's herbarium, now in the possession of John Martin Cripps, Esq., F.L.S. We are obliged to Mr. Lambert and to Lady Amelia Hume for fine specimens, cultivated in their gardens in the open air. The plant is biennial, and perfectly hardy. The beautiful little umbels, parti-coloured and flat when young, become hemisphærical as the flowers open, and are completely powdered over, as it were, with innumerable whitish anthers. The stem when wounded exudes a very copious yellow fœtid resin, and is 3 or 4 feet high, branched, furrowed, leafy, minutely downy. Leaves tripinnate, glaucous, somewhat downy; the leaflets oblong or wedgeshaped, decurrent, acute. Umbels terminal, erect, finely downy, flattish, of very numerous rays. General involucrum of one short strapshaped leaf; in the large primary umbel of several. Partial involucrum with a broad simple base, fringed with very numerous, horizontal, linear, acute leaflets. Flowers innumerable, almost sessile, crowded. Petals red and white, inflexed, regular,

almost all equal. Stamens longer than the petals, white, with round pale anthers. Germen furrowed. Styles short, with simple stigmas. Fruit elliptical.

The flowers smell faintly like those of the Barberry. In natural affinity, as well as in the broad base of the partial involucrum, this species comes nearest to *Seseli Hippomarathrum*, from which it differs in its much greater size, leafy stem, broader leaflets, and many other particulars.

A magnified flowers complete, with its germen and short stalk. *b*, B unripe fruit.

INDEX TO VOL. II.

* *Holmskioldia sanguinea* of Retzius and Willdenow, Sp. Pl. vol. iii. 360. See Introduction to Physiological and Systematical Botany, 403.

† There having been another *Ventenatia* previously published, though unknown to me, this genus is now called *Stylidium*. See the same work, 464.

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